

17

**CUMULATIVE IMPACTS AND
OTHER CEQA SECTIONS**

17.1 INTRODUCTION

The Cumulative Impacts and Other CEQA Sections chapter of the EIR includes discussions regarding those topics that are required to be included in an EIR, pursuant to the CEQA Guidelines Section 15126.2. The chapter includes an evaluation of the project’s contribution toward cumulative impacts for each environmental topic evaluated in Chapters 4 through 16 of this EIR, as well as discussions of the project’s significant irreversible environmental changes, significant environmental effects which cannot be avoided, and growth-inducing impacts.

17.2 CUMULATIVE IMPACTS

CEQA Guidelines Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that adversely affect the environment. “Cumulative impacts” are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355; see also Pub. Resources Code, Section 21083, subd. [b]). Stated another way, “[...] a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” (CEQA Guidelines Section 15130, subd. [a][1])

“[I]ndividual effects may be changes resulting from a single project or a number of separate projects.” (CEQA Guidelines Section 15355, subd. [a]) “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” (CEQA Guidelines Section 15355, subd. [b])

The need for cumulative impact assessment reflects the fact that, although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the incremental effect may be “cumulatively considerable” and, thus, significant when viewed together with environmental changes anticipated from past, present, and probable future projects (CEQA Guidelines Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). This formulation indicates that particular impacts may be less-than-significant on a project-specific basis, but significant on a cumulative basis, because their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable.

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of “past, present, and probable future projects producing related or cumulative impacts” relevant to the various categories, either through the preparation of a “list” of such projects or through the use of “a

summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact” (id., subd. [b][1]).

The possibility exists that the “cumulative impact” of multiple projects will be significant, but that the incremental contribution to that impact from a particular project may not itself be “cumulatively considerable.” Thus, CEQA Guidelines Section 15064, Subdivision (h)(5) states, “[...] the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” Therefore, it is not necessarily true that, even where cumulative impacts are significant, any level of incremental contribution must be deemed cumulatively considerable.

In accordance with CEQA Guidelines section 15130(b), “the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.”

Cumulative Setting

In accordance with Section 15130(b)(1)(B) of the CEQA Guidelines, the majority of the cumulative analysis in this section is based upon a summary of projections contained in the Dry Creek-West Placer Community Plan; more specifically, buildout of the Dry Creek-West Placer area in accordance with the land use designations shown on the adopted Community Plan Land Use Map (as amended), as well as buildout of other reasonably foreseeable projects within the project region. Such projects include, but are not limited to, the Placer Vineyards Specific Plan and the Riolo Vineyards Specific Plan.

Limited situations exist where the geographic setting differs. For example, the geographic setting for the hydrology analyses is the 101-square-mile Dry Creek Watershed, within which the project site is located. Other examples include air quality, for which the cumulative geographic setting is the Sacramento Valley Air Basin (SVAB). Global climate change is, by nature, a cumulative impact. Emissions of GHG contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects could contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA, and due to the regulatory context pertaining to GHG emissions and global climate change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

In addition, as discussed in Chapter 15, Transportation and Circulation, of this EIR, the cumulative traffic analysis relied on the County’s regional traffic model, which was last updated for the Placer Vineyards Specific Plan EIR and was selected as the most valid source of future background traffic

volumes in the study area. According to County staff, the regional traffic model reflects current land use assumptions for development in the DCWPCP area.

For environmental resource areas that have a different cumulative setting from that discussed above, the specific cumulative setting for that resource area is presented along with the cumulative impact discussion in the relevant section below.

Cumulative Impacts and Mitigation Measures

The technical chapters of this EIR (Chapters 4 through 16) describe the Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures, while the Cumulative Impacts and Other CEQA Sections chapter of the EIR includes cumulative analyses as shown below. As stated above, GHG emissions and global climate change is, by nature, a cumulative impact. Thus, the proposed project's impacts related to GHG emissions and global climate change are included in this chapter.

Aesthetics

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also have localized aesthetic impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

Two types of aesthetic impacts may be additive in nature and thus cumulative, including night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. As development in one area increases and possibly expands over time, and meets or connects with development in an adjoining ex-urban area, the effect of night sky lighting experienced outside of the region may increase in the form of larger and/or more intense nighttime glow in the viewshed.

Similarly, as development in one area changes from rural to urban, and this pattern continues to occur throughout the undeveloped areas of a jurisdiction, the changes in visual character may become additive and cumulatively considerable. The proposed project's incremental contribution to night sky lighting and changes in visual character are addressed below.

17-1 Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout in the DCWPCP area. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

The geographic setting for analysis of long-term cumulative changes in visual character associated with the proposed project is the area covered by the DCWPCP, as development within the DCWPCP has the potential to affect many of the same views analyzed for the

proposed project. Views of the project site include, but are not limited to, views from Antelope Road and PFE Road. Specific views from such roadways are identified in Figures 4-9 through 4-12 of this EIR. Currently, two projects within the cumulative geographic setting are under construction or are planned: the Riolo Vineyards Specific Plan (under construction) and the Placer Vineyards Specific Plan (planned).

Future development within the DCWPCP would result in changes to the existing land use environment through conversion of vacant land to developed uses that would result in a change in visual character. The goals and objectives of the DCWPCP are to identify those features of the DCWPCP area that characterize the unique nature and identifying traits of the community and then to specify standards of site development for proposed projects which would implement the goals and policies of the DCWPCP. Development of the Riolo Vineyards Specific Plan and the Placer Vineyards Specific Plan, as well as the proposed project site, would change the existing visual character of those specific locations from vacant or minimally developed land to more intensively developed residential areas with one- and two-story homes on various sized lots. However, such development would be subject to existing regulations and guidelines designed to ensure compatibility with adjacent land uses and ensure a pleasing visual character. The development would change the existing visual nature or character of the site and its surroundings in a manner generally anticipated by, and consistent with, land use and development considered in the DCWPCP.

Specifically, such projects would be required to comply with the Placer County Landscape Guidelines, the Placer County Design Guidelines, the specific design guidelines contained in the DCWPCP, and all applicable sections of the Placer County Code. The Placer County Design Guidelines Manual provides instruction on the design direction to be implemented with the construction of new buildings, which includes setbacks, extensive use of wood, colors consistent with earth tones and significant amounts of landscaping. Such standards serve to reduce impacts on visual character and maintain consistency with the project surroundings. The proposed project would use natural building materials (e.g., masonry, stucco, wood and stone) and colors (complementary natural, earth tones) consistent with the Placer County Design Guidelines. While development of the cumulative projects in the DCWPCP would result in conversion of vacant land to developed land, the projects, including the proposed project, would develop new residential development types that would be well designed and consistent with other residential developments in the larger project vicinity. Development patterns would include landscaping and setbacks that would both screen the proposed development from the adjacent neighbors and provide a transition space from existing surrounding rural residential lots.

Public views of the project site and surrounding area are available from the segments of PFE Road and Antelope Road adjacent to the project site. Portions of the project site have been previously developed for various uses including orchards, residences, and a commercial nursery. Existing uses of the site create a partially fragmented visual character, rather than a cohesive visual character that is inherent to larger, uninterrupted expanses of agricultural uses in western Placer County. Public views from PFE Road and Antelope Road are limited to the project site and the area immediately surrounding the site, due to existing topography and existing off-site development. Considering the fragmented nature

of the project site and lack of expansive views of the area surrounding the site, the proposed project site does not represent an area of high visual quality and visual changes to the project site would not affect a significantly large area of the DCWPCP.

Cumulative buildout in the geographic area would result in a substantial change in visual character of region and, thus, a significant cumulative impact would occur. However, publicly available views of the project site are limited to sections of PFE Road and Antelope Road adjacent to the project site, and such views consist of discontinuous agricultural uses, interrupted by scattered structures and a commercial nursery. In addition, the proposed project would be required to comply with the Placer County Landscape Guidelines, the Placer County Design Guidelines, the specific design guidelines contained in the DCWPCP, and all applicable sections of the Placer County Code, which would ensure that the proposed project incorporates natural building materials, colors, and landscaping. Therefore, the project's incremental contribution to the significant impact would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

17-2 Creation of new sources of light or glare associated with cumulative development of the proposed project in combination with future buildout in the DCWPCP. Based on the analysis below, the impact is *less than significant*.

Cumulative effects of lighting are visible over a wide area, due to the potential for lighting from a number of projects to create sky glow. Cumulative development throughout the DCWPCP area, particularly conversion of rural or currently vacant sites to urban uses, would increase the sources of light and glare, which would have the potential to contribute to sky glow in the area. Such sources of light would be typical of existing residential development in the project area, such as the residential subdivisions located to the west and south of the project site.

However, cumulative development within the DCWPCP area, including the proposed project, would be subject to existing regulations and guidelines related to light and glare. For example, Section 17.54.070(i) of the Placer County Code requires that lighting in new development is consistent with the lighting standards contained within the Placer County Design Guidelines Manual. As described in Impact 4-4 of the Aesthetics chapter of this EIR, the proposed project in particular would be required to submit a lighting plan for the project to the Placer County Planning Services Division for review and approval prior to the issuance of any building permit (see Mitigation Measure 4-4). Mitigation Measure 4-4 requires the project's lighting to be Dark-Sky compliant as specified by the International Dark-Sky Association.

Based upon the above analysis, cumulative development within the DCWPCP area would be subject to Section 17.54.070(i) of the Placer County Code requiring that new development within the County comply with lighting standards, and prior to project implementation, a lighting plan must be submitted showing that the proposed project would

avoid contribution to sky glow through Dark-Sky design compliance. Thus, the proposed project, in combination with cumulative development of the DCWPCP area would not be anticipated to result in a significant cumulative impact related to light and glare and the impact would be *less than significant*.

Mitigation Measure(s)

None required.

Air Quality

A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the cumulative air quality analysis includes Placer County and surrounding areas within the portion of the Sacramento Valley Air Basin (SVAB) that is designated nonattainment for ozone and respirable particulate matter (PM₁₀).

17-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

The proposed project is within a nonattainment area for ozone and PM₁₀. By nature, air pollution is largely a cumulative impact. The population growth and vehicle usage within the nonattainment area from the proposed project, in combination with other past, present, and reasonably foreseeable projects within Placer County and surrounding areas, contributes to the region's adverse air quality impacts on a cumulative basis, and could either delay attainment of AAQS or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project's emissions of criteria air pollutants would contribute to cumulative regional air quality effects.

The Placer County Air Pollution Control District (PCAPCD) directs lead agencies to use the region's existing attainment plans as a basis for analysis of cumulative emissions. If a project would interfere with an adopted attainment plan, the project would inhibit the future attainment of AAQS, and thus result in a significant incremental contribution to cumulative emissions. As discussed throughout Chapter 5, Air Quality, the PCAPCD's recommended thresholds of significance for ozone precursors and PM₁₀ are based on attainment plans for the region. Thus, the PCAPCD concluded that if a project's ozone precursor and PM₁₀ emissions would be less than PCAPCD project-level thresholds, the project would not be expected to conflict with any relevant attainment plans, and would not result in a cumulatively considerable contribution to a significant cumulative impact. As a result, the operational phase cumulative-level emissions thresholds established by PCAPCD are identical to the project-level operational emissions thresholds; the operational/cumulative thresholds are presented in Table 17-1.

Table 17-1 PCAPCD Thresholds of Significance	
Pollutant	Operational/Cumulative Threshold (lbs/day)
ROG	55
NO _x	55
PM ₁₀	82

Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. August 2017.

Accordingly, if the proposed project would result in an increase of ROG, NO_x or PM₁₀ in excess of PCAPCD's operational phase cumulative-level emissions threshold, which are identical to PCAPCD's project-level operational emissions thresholds, the project could potentially result in a significant incremental contribution towards cumulative air quality impacts. The proposed project's cumulative contribution to regional emissions is presented in Table 17-2.

Table 17-2 Maximum Unmitigated Project Contribution of Operational Emissions to Cumulative Conditions		
Pollutant	Project Emissions (lbs/day)	PCAPCD Cumulative Significance Threshold (lbs/day)
ROG	20.30	55
NO _x	38.90	55
PM ₁₀	15.30	82

Source: CalEEMod, November 2017 (see Appendix C).

As shown in Table 17-2, the proposed project's operational emissions of ROG, NO_x, and PM₁₀ would be below the PCAPCD's applicable thresholds of significance. Considering the above, the proposed project would not result in a significant incremental contribution to a cumulative violation of any air quality standards, contribute substantially to an existing or projected air quality violation, or conflict with and/or obstruct implementation of the PCAPCD's air quality planning efforts. As such, the proposed project's incremental contribution to regional air quality impacts would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

Biological Resources

- 17-4 Cumulative loss of habitat for special-status species. Based on the analysis below and despite implementation of mitigation, the impact is *cumulatively considerable and significant and unavoidable*.**

Implementation of the proposed project, in combination with other development within the DCWPCP area, such as the Placer Vineyards Specific Plan and the Riolo Vineyards

Specific Plan, would result in a significant cumulative impact related to the loss of special-status species habitat.

As discussed in Chapter 6, Biological Resources, of this EIR, the proposed project site, as well as the areas identified for implementation of off-site sewer infrastructure work, contain an abandoned almond orchard, annual brome grassland, disturbed areas, a plant nursery, oak woodland, riparian woodland, seasonal wetland, seasonal wetland swale, Dry Creek, intermittent drainage areas, a pond, and roadside ditches. Implementation of the proposed project, as well as the separate implementation of the potential future ultimate widening of PFE Road, would result in impacts the foregoing habitat areas as shown in Table 17-3. The habitats listed represent potential habitat for various special-status species as discussed in Chapter 6, of this EIR.

Table 17-3 Habitat Area Impacts (Acres)				
Habitat Type	Impacts Related to Potential Ultimate Widening of PFE Road	Project Impacts		
		Impact Area within Project Site	Sewer Alignment Alternatives	
			Alternative 2	Alternative 4
Abandoned Almond Orchard	0.0	20.6	0.0	0.0
Annual Brome Grassland	0.3	60.0	0.9	0.0
Disturbed	0.0	8.2	0.6	1.5
Nursery	0.0	14.4	0.0	0.0
Oak Woodland	0.5 ¹	1.0	0.7	0.0
Riparian Woodland	1.1 ¹	0.1	0.6	0.0
Seasonal Wetland	0.069	0.130	0.000	0.000
Seasonal Wetland Swale	0.000	0.542	0.000	0.000
Dry Creek	0.000	0.000	0.166	0.000 ²
Intermittent Drainage	0.118	0.008	0.000	0.000
Pond	0.000	0.204	0.000	0.000
Roadside Ditch	0.000	0.065	0.000	0.000
Notes: ¹ Includes acres of Direct Impact areas as well as Indirect Impact areas. ² Approximately 0.062 acre of Dry Creek is located within Sewer Alignment Alternative 4; however, as the sewer line would be attached to the underside of an existing bridge using hangers, impacts to Dry Creek are not anticipated as a result of this alternative.				
<i>Source: Madrone Ecological Consulting, LLC., Biological Resources Assessment for Mill Creek, April 2018.</i>				

This EIR provides a wide range of mitigation to minimize potential adverse effects to all special-status plant and wildlife species with the potential to occur within the project site. For instance, Mitigation Measure 6-9(b) would require that the proposed project conform with the U.S. Army Corps of Engineers’ “no-net-loss” policy for wetland mitigation. Thus, any wetlands lost that provide habitat for special-status branchiopod species within the project site must be compensated through the protection of existing wetlands, avoidance of wetland impacts, or creation of new wetland habitat elsewhere. Similar compensatory

mitigation is included in Chapter 6 for several special-status species including Swainson's hawk should they be actively nesting within 10 miles of the project site prior to commencement of construction.

It should be noted that while the project would involve loss of some existing on-site habitat, the eastern portion of the project site, containing oak woodlands, intermittent drainages, and seasonal wetlands would be dedicated as open space through a conservation easement or other similar mechanism. Such a dedication would ensure that portions of the existing habitat within the project site remain in perpetuity, following implementation of the proposed project.

In addition to mitigation measures requiring the compensation of lost habitat, Chapter 6 of this EIR contains mitigation measures requiring that pre-construction surveys be conducted to reduce the potential for implementation of the proposed project, including off-site sewer alternative, to result in loss of individual special-status plants or wildlife. Such mitigation measures require that should pre-construction surveys identify special-status species within areas to be impacted by the proposed project, avoidance measures must be implemented to prevent the loss of identified special-status species.

It should be noted that the draft Placer County Conservation Plan (PCCP), as currently proposed, is designed to ensure that lands within western Placer County would be managed to continue to support the survival and well-being of the species covered by the PCCP, as well as the survival of hundreds of other species that are dependent on the same habitat. The project site has been designated in both the PCCP and the DCWPCP as an area anticipated for future urban development. The proposed project would not include the conversion of any lands not previously identified for development and would include protection of portions of the project site within designated open space, as discussed above. Therefore, the proposed project would not result in the conversion of habitat beyond what has been previously anticipated for the site by both the PCCP and the DCWPCP.

Despite the imposition of mitigation measures within Chapter 6, the proposed project, in combination with other recently approved projects and buildout of the DCWPCP would result in the cumulative loss of wetlands, native trees, and other habitats, such as annual grassland. The proposed project's incremental contribution toward this significant cumulative impact would be *cumulatively considerable* and *significant*.

Mitigation Measure(s)

Chapter 6, Biological Resources, of this EIR contains mitigation measures sufficient to reduce all project-specific impacts to a less than significant level. Despite the implementation of such measures, the project's incremental contribution toward this significant cumulative impact would remain *cumulatively considerable* and *significant and unavoidable*.

17-4 *Implement Mitigation Measures 6-1, 6-2, 6-3(a) and (b), 6-4(a) and (b), 6-5, 6-6(a) and (b), 6-7, 6-8, 6-9(a) through (c), and 6-11(a) through (c).*

Cultural Resources

17-5 Cumulative loss of cultural resources. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts to cultural resources related to implementation of the proposed project are analyzed in Chapter 7 of this EIR. Generally, while some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archeological find at one project site would not generally be made worse by impacts to a cultural resource at another site due to development of another project. Rather the resources and the effects upon them are generally independent. A possible exception to the aforementioned general conditions would be where a cultural resource represents the last known example of its kind or is part of larger cultural resources such as a single building along an intact historic Main Street. For such a resource, cumulative impacts, and the contribution of a project to them, may be considered cumulatively significant.

As described in detail in Chapter 7 of this EIR, the proposed project site does not contain historical resources that would be eligible for inclusion on the NRHP or considered significant pursuant to CEQA. Furthermore, implementation of the project-specific mitigation measures set forth in Chapter 7 of this EIR (Mitigation Measures 7-2[a] through 7-6) would ensure that any impacts to previously unknown, subsurface resources that are discovered on the project site during construction activities are reduced to less than significant.

Similar to the proposed project, future development projects within the DCWPCP would be required to implement project-specific mitigation to ensure any potential impacts to identified cultural resources are reduced to a less-than-significant level. Therefore, given that cultural resource impacts are generally site-specific and each future project within the DCWPCP would be required to mitigate such impacts, any potential impacts associated with cumulative buildout of the DCWPCP area would not combine to result in a significant cumulative impact.

Based on the above, the potential for cumulative impacts related to cultural resources, to which the proposed project might contribute, would be *less-than-significant* with implementation of site-specific mitigation.

Mitigation Measure(s)

None required.

Geology and Soils/Mineral Resources

17-6 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts to geology, soils, seismicity, and mineral resources, related to implementation of the proposed project are analyzed in Chapter 8 of this EIR. While some geologic characteristics may affect regional construction practices, impacts and mitigation measures are primarily site-specific and project-specific. For example, impacts resulting from development on expansive soils at one project site are not worsened by impacts from development on expansive soils or undocumented fill at another project site. Rather, the soil conditions, and the implications of such conditions for each project, are independent.

As such, the potential for cumulative impacts related to geology, soils, seismicity and mineral resources, to which implementation of the proposed project might contribute, is *less than significant*.

Mitigation Measure(s)

None required.

Greenhouse Gas Emissions

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. Since the beginning of the Industrial Revolution, global atmospheric concentrations of GHGs have increased due to human activities such as the burning of fossil fuels, clearing of forests and other activities. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.¹

The primary GHG emitted by human activities is CO₂, with the next largest components being CH₄ and N₂O. The primary sources of CH₄ emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing N₂O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that energy-related activities account for the majority of U.S. emissions. Electricity generation is the largest single-source of GHG emissions, and transportation is the second largest source, followed by industrial activities. The

¹ U.S. Environmental Protection Agency. Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases. Available at <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>. Accessed November 17, 2016.

agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.² Emissions of GHG are partially offset by uptake of carbon and sequestration in forests, trees in urban areas, agricultural soils, landfilled yard trimmings and food scraps, and absorption of CO₂ by the earth’s oceans; however, the rate of emissions of GHGs currently outpaces the rate of uptake, thus causing global atmospheric concentrations to increase.³ Attainment concentration standards for GHGs have not been established by the federal or State government.

Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the U.S. Environmental Protection Agency (USEPA), the global warming potential of a gas, or aerosol, to trap heat in the atmosphere is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas.” The reference gas for comparison is CO₂. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO₂, as well as the decay rate of each gas relative to that of CO₂. Each gas’s GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO₂, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of CO₂, as shown in Table 17-4.

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide (CO ₂)	50-200 ¹	1
Methane (CH ₄)	12	25
Nitrous Oxide (N ₂ O)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Note:
¹ For a given amount of CO₂ emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.

Source: USEPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013, April 15, 2015.

² U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: <http://epa.gov/climatechange/ghgemissions/sources/industry.html>. Accessed August 2016.

³ U.S. Environmental Protection Agency. *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*. Available at <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>. Accessed November 17, 2016.

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 22,800 times that of CO₂. The “specified time horizon” is related to the atmospheric lifetimes of such GHGs, which are estimated by the USEPA to vary from 50 to 200 years for CO₂, to 50,000 years for tetrafluoromethane. Longer atmospheric lifetimes allow GHG to buildup in the atmosphere; therefore, longer lifetimes correlate with the global warming potential of a gas. The common indicator for GHG is expressed in terms of metric tons of CO₂ equivalents (MTCO_{2e}).

Effects of Global Climate Change

Uncertainties exist as to exactly what the climate changes will be in various local areas of the Earth. According to the Intergovernmental Panel on Climate Change’s Working Group II Report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*,⁴ as well as the California Natural Resources Agency’s report *Safeguarding California: Reducing Climate Risk*⁵ climate change impacts to California may include:

- Increasing evaporation;
- Rearrangement of ecosystems as species and ecosystems shift northward and to higher elevations.
- Increased frequency, duration, and intensity of conditions conducive to air pollution formation (particularly ozone);
- Reduced precipitation, changes to precipitation and runoff patterns, reduced snowfall (precipitation occurring as rain instead of snow), earlier snowmelt, decreased snowpack, and increased agricultural demand for water;
- Increased experiences of heat waves;
- Increased growing season and increased growth rates of weeds, insect pests and pathogens;
- Inundation by sea level rise, and exacerbated shoreline erosion; and
- Increased incidents and severity of wildfire events and expansion of the range and increased frequency of pest outbreaks.

Analysis of GHGs and Global Climate Change

Analysis of global climate change presents the challenge of analyzing the relationship between local and global activities. GHGs are not generally thought of as traditional air pollutants because GHGs, and their impacts, are global in nature, while air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Accordingly, the issue of global climate change is different from any other areas of air quality impact analysis. A global climate change analysis must be conducted on a global level, rather than the typical local or regional setting, and requires consideration of not only emissions from the project under consideration, but also the extent of the displacement, translocation, and redistribution of emissions.

⁴ Intergovernmental Panel on Climate Change. *Climate Change 2007: Impacts, Adaptation, and Vulnerability*. 2007.

⁵ California Natural Resources Agency. *Safeguarding California: Reducing Climate Risk*. July 2014.

In the usual context, where air quality is linked to a particular location or area, considering the creation of new emissions in that specific area to be an environmental impact whether or not the emissions are truly “new” emissions to the overall globe is appropriate. In fact, the approval of a new developmental plan or project does not necessarily create new automobile drivers – the primary source of a land use project’s emissions. Rather, a new land use project may simply be redistributing existing mobile emissions. For example, future workers at the project site could already be working within the County or region and would be moving from other parts of the region to the project site, which could result in shorter or longer associated vehicle trips, but would not introduce new vehicle trips to the overall region. Accordingly, the use of models that measure overall emissions increases without accounting for existing emissions would substantially overstate the impact of the development project on global climate change. Thus, an accurate analysis of GHG emissions substantially differs from other air quality impacts, where the “addition” of redistributed emissions to a new locale can make a substantial difference to overall air quality in that area.

Regulatory Context

Global climate change and energy are monitored through the efforts of various international, federal, State, and local government agencies. Agencies work jointly and individually to improve current conditions through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating global climate change and energy within the project area are discussed below.

Federal

The most prominent federal regulation is the Federal Clean Air Act (FCAA), which is implemented and enforced by the USEPA.

FCAA and USEPA

The FCAA requires the USEPA to set NAAQS and designate areas with air quality not meeting NAAQS as nonattainment. The USEPA is responsible for enforcement of NAAQS for atmospheric pollutants and regulates emission sources that are under the exclusive authority of the federal government including emissions of GHGs. The USEPA’s air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990. The USEPA has adopted policies consistent with FCAA requirements demanding states to prepare SIP that demonstrate attainment and maintenance of the NAAQS.

The USEPA has been directed to develop regulations to address the GHG emissions of cars and trucks. The Mandatory Reporting of Greenhouse Gases Rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHG, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to

submit annual reports to the USEPA. To track the national trend in emissions and removals of GHG since 1990, USEPA develops the official U.S. GHG inventory each year.

On December 7, 2009, USEPA issued findings under Section 202(a) of the CAA concluding that GHGs are pollutants that could endanger public health. Under the so-called Endangerment Finding, USEPA found that the current and projected concentrations of the six key well-mixed GHGs – CO₂, CH₄, N₂O, PFCs, SF₆, and HFCs – in the atmosphere threaten the public health and welfare of current and future generations. These findings do not, by themselves, impose any requirements on industry or other entities.

State Regulations

California has adopted a variety of regulations aimed at reducing GHG emissions. The adoption and implementation of the key State legislation described in further detail below demonstrates California's leadership in addressing global climate change. Only the most prominent and applicable California GHG-related legislation are included below; however, an exhaustive list and extensive details of California air quality legislation could be found at the California Air Resources Board (CARB) website.⁶

AB 1493

California AB 1493 (Stats. 2002, ch. 200) (Health & Safety Code, §§42823, 43018.5), known as Pavley I, was enacted on July 22, 2002. AB 1493 requires that the CARB develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state.” On June 30, 2009, the USEPA granted a waiver of CAA preemption to California for the State's GHG emission standards for motor vehicles, beginning with the 2009 model year. Pursuant to the CAA, the waiver allows for the State to have special authority to enact stricter air pollution standards for motor vehicles than the federal government's. On September 24, 2009, the CARB adopted amendments to the Pavley regulations (Pavley I) that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The second phase of the Pavley regulations (Pavley II) is expected to affect model year vehicles from 2016 through 2020. The CARB estimates that the regulation would reduce GHG emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.

Renewable Portfolio Standard (RPS)

Established in 2002 under Senate Bill (SB) 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to

⁶ California Air Resources Board. *Laws and Regulations*. Available at: <http://www.arb.ca.gov/html/lawsregs.htm>. Accessed February 2018.

increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020. In 2015, SB 350 was signed into law by Governor Jerry Brown; SB 350 extended the State's RPS program by requiring that publicly owned utilities procure 50 percent of their electricity from renewable energy sources by 2030.

Executive Order S-03-05

On June 1, 2005, then-Governor Schwarzenegger signed Executive Order S-03-05, which established total GHG emission targets. Specifically, emissions are to be reduced to year 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is also directed to submit biannual reports to the governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts.

To comply with the Executive Order, the Secretary of the Cal-EPA created a Climate Act Team (CAT) made up of members from various State agencies and commissions. In March 2006, CAT released their first report. In addition, the CAT has released several "white papers" addressing issues pertaining to the potential impacts of climate change on California.

Assembly Bill 32

In September 2006, Assembly Bill (AB) 32, the California Climate Solutions Act of 2006, was enacted (Stats. 2006, ch. 488) (Health & Saf. Code, §38500 et seq.). AB 32 delegated the authority for its implementation to the CARB and directs CARB to enforce the State-wide cap. Among other requirements, AB 32 required CARB to (1) identify the State-wide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020, and (2) develop and implement a Scoping Plan. Accordingly, the CARB has prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008 and updated in 2014 and 2017.⁷ The following sections present further information regarding plans and programs that have been introduced in order to meet the statutory requirements of AB 32.

California Scoping Plan

The 2008 Scoping Plan identified GHG reduction measures that would be necessary to reduce statewide emissions as required by AB 32. Many of the GHG reduction measures identified in the 2008 Scoping Plan have been adopted, such as the Low Carbon Fuel Standard, Pavley, Advanced Clean Car standards, RPS, and the State's Cap-and-Trade system.

⁷ California Air Resources Board. *AB 32 Scoping Plan*. Available at: <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed February 2018.

Building upon the 2008 Scoping plan, the 2013 and 2017 Scoping Plan Updates introduced new strategies and recommendations to continue GHG emissions reductions. The 2013 Scoping Plan Update created a framework for achievement of 2020 GHG reduction goals and identified actions that may be built upon to continue GHG reductions past 2020, as required by AB 32. Following the 2013 Scoping Plan, the 2017 Scoping Plan sets a path for the achievement of California's year 2030 GHG reduction goals.

California GHG Cap-and-Trade Program

California's GHG Cap-and-Trade Program was originally envisioned in the 2008 Scoping Plan as a key strategy to achieve GHG emissions reductions mandated by AB 32. The Cap-and-Trade Program is intended to put California on the path to meet the GHG emission reduction goal of 1990 levels by the year 2020, and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors has been established and facilities or industries subject to the cap are able to trade permits (allowances) to emit GHGs. The CARB designed the California Cap-and-Trade Program to be enforceable and to meet the requirements of AB 32.⁸ The Program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions. On January 1, 2014 California linked the state's cap-and-trade plan with Quebec's, and on January 1, 2015 the program expanded to include transportation and natural gas fuel suppliers.⁹ AB 398 was adopted by the State's legislature in July 2017, which reauthorized the Cap-and-Trade program through December 31, 2030. The reauthorization and continued operation of the Cap-and-Trade program represents a key strategy within the State's 2017 Scoping Plan Update for the achievement of California's year 2030 GHG reduction goals.

Executive Order S-01-07

On January 18, 2007, then-Governor Schwarzenegger signed Executive Order S-01-07, which mandates that a State-wide goal be established to reduce carbon intensity of California's transportation fuels by at least 10 percent by 2020. The Order also requires that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California.

SB 97

As amended, SB 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. The bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects

⁸ California Air Resources Board. *Overview of ARB Emissions Trading Program*. Accessible at: https://www.arb.ca.gov/cc/capandtrade/guidance/cap_trade_overview.pdf. Accessed February 2018.

⁹ *Ibid.*

of GHG emissions. As directed by SB 97, the OPR amended the CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of GHG emissions and the effects of GHG emissions in CEQA documents. The amendments included revisions to the *Appendix G Initial Study Checklist* that incorporated a new subdivision to address project-generated GHG emissions and contribution to climate change. The new subdivision emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. Under the revised CEQA Appendix G checklist, an agency should consider whether a project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and whether a project conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing emission of GHGs.

Further guidance based on SB 97 suggests that the lead agency make a good-faith effort, based on available information, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. When assessing the significance of impacts from GHG emissions on the environment, lead agencies should consider the extent to which the project may increase or reduce GHG, as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance determined applicable to the project, and/or the extent to which the project complies with adopted regulations or requirements to implement a state wide, regional, or local plan for the reduction or mitigation of GHG emissions. Feasible mitigation under SB 97 includes on-site and off-site measures, such as GHG emission-reducing design features and GHG sequestration.

SB 375

In September 2008, SB 375, known as the Sustainable Communities and Climate Protection Act of 2008, was enacted, which is intended to build on AB 32 by attempting to control GHG emissions by curbing sprawl. SB 375 enhances CARB's ability to reach goals set by AB 32 by directing CARB to develop regional GHG emission reduction targets to be achieved by the State's 18 metropolitan planning organizations (MPOs), including the Sacramento Area Council of Governments (SACOG). Under SB 375, MPOs must align regional transportation, housing, and land-use plans and prepare a "Sustainable Communities Strategy" (SCS) to reduce the amount of vehicle miles traveled in their respective regions and demonstrate the region's ability to attain its GHG reduction targets. SB 375 provides incentives for creating walkable and sustainable communities and revitalizing existing communities, and allows home builders to get relief from certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Furthermore, SB 375 encourages the development of alternative transportation options, which will reduce traffic congestion.

Executive Order S-13-08

Then-Governor Arnold Schwarzenegger issued Executive Order S-13-08 on November 14, 2008. The Executive Order is intended to hasten California's response to the impacts of global climate change, particularly sea level rise, and directs state agencies to take specified

actions to assess and plan for such impacts, including requesting the National Academy of Sciences to prepare a Sea Level Rise Assessment Report, directing the Business, Transportation, and Housing Agency to assess the vulnerability of the State's transportation systems to sea level rise, and requiring the Office of Planning and Research and the Natural Resources Agency to provide land use planning guidance related to sea level rise and other climate change impacts.

The order also required State agencies to develop adaptation strategies to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. The adaptation strategies report summarizes key climate change impacts to the State for the following areas: public health; ocean and coastal resources; water supply and flood protection; agriculture; forestry; biodiversity and habitat; and transportation and energy infrastructure. The report recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

AB 197 and SB 32

On September 8, 2016, AB 197 and SB 32 were enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030. Additionally, SB 32 emphasized the critical role that reducing GHG emissions would play in protecting disadvantaged communities and the public health from adverse impacts of climate change. Enactment of SB 32 was predicated on the enactment of AB 197, which seeks to make the achievement of SB 32's mandated GHG emission reductions more transparent to the public and responsive to the Legislature. Transparency to the public is achieved by AB 197 through the publication of an online inventory of GHG and TAC emissions from facilities required to report such emissions pursuant to Section 38530 of California's Health and Safety Code. AB 197 further established a six-member Joint Legislative Committee on Climate Change Policies, which is intended to provide oversight and accountability of the CARB, while also adding two new legislatively-appointed, non-voting members to the CARB. Additionally, AB 197 directs the CARB to consider the "social costs" of emission reduction rules and regulations, with particular focus on how such measures may impact disadvantaged communities.

California Building Standards Code

California's building codes (California Code of Regulations [CCR], Title 24) are published on a triennial basis, and contain standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Standards Commission (CBSC) is responsible for the administration and implementation of each code cycle, which includes the proposal, review, and adoption process. Supplements and errata are issued throughout the cycle to make necessary mid-term corrections. The 2016 code has been prepared and became effective January 1, 2017. The California building code standards apply State-wide; however, a local jurisdiction may

amend a building code standard if the jurisdiction makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

It should be noted that the California Energy Commission recently approved updates to 2019 CBSC. The 2019 CBSC will take effect January 1, 2020, and all building constructed following January 1, 2020 must be built in compliance with the 2019 CBSC. The 2019 CBSC includes various provisions that would increase the energy efficiency of new buildings within California. Included in the updates for the 2019 CBSC is a requirement that all new low-rise residential structures (i.e., structures containing three or fewer stories) must include photovoltaic (PV) systems with annual output equal to or greater than the dwelling's annual electrical usage.¹⁰

California Green Building Standards Code

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which became effective with the rest of the CBSC on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

The CALGreen Code encourages local governments to adopt more stringent voluntary provisions, known as Tier 1 and Tier 2 provisions, to further reduce emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. Placer County has not adopted any voluntary provisions of the CALGreen Code to date.

Building Energy Efficiency Standards

The 2016 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high performance attics and walls.

¹⁰ California Energy Commission. *2019 Title 24, Part 6, Building Energy Efficiency Standards Rulemaking*. April 23, 2018.

Advanced Clean Cars Program

In coordination with the US EPA and the National Highway Traffic Safety Administration, the CARB adopted the Advanced Clean Cars program in 2012. The Advanced Clean Cars program is designed to reduce the emissions of criteria pollutants and GHGs from mobile sources within the State. The Advanced Clean Cars program includes two main components, the Low-Emission Vehicle regulations, which are designed to reduce pollution from light- and medium-duty vehicles, and the Zero-Emission Vehicle regulation, which requires manufacturers to produce a greater number of zero emissions vehicles from 2018 through 2025.¹¹

Local Regulations

The PCAPCD is the principal agency involved with the regulation of GHG emissions within Placer County.

Placer County Air Pollution Control District

Various local, regional, State and federal agencies share the responsibility for air quality management in Placer County. The PCAPCD operates at the local level and is tasked with enforcing the implementation of federal and State programs and regulations. The PCAPCD works jointly with the USEPA, CARB, other air districts in the region, county and city transportation and planning departments, and various non-governmental organizations to work towards improving global climate change through a variety of programs. Programs include the adoption of regulations, policies and guidance, extensive education and public outreach programs, as well as emission reducing incentive programs.

Standards of Significance

Nearly all development projects in the region have the potential to generate air pollutants that may increase global climate change. On October 13, 2016, the PCAPCD adopted GHG emissions thresholds. The thresholds were designed to analyze a project's compliance with applicable state laws including AB 32 and SB 32.¹² The GHG thresholds include a bright-line threshold for the construction and operational phases of land use projects and stationary source projects, a screening level threshold for the operational phase of land use projects, and efficiency thresholds for the operational phase of land use projects that result in GHG emissions that fall between the bright-line threshold and the screening level threshold. The bright-line threshold of 10,000 MTCO_{2e}/yr represents the level at which a project's GHG emissions would be substantially large enough to contribute to cumulative impacts and mitigation to lessen the emissions would be mandatory. The PCAPCD further recommends use of the 10,000 MTCO_{2e}/yr for analysis of construction-related GHG emissions for land use projects. Any project with GHG emissions below the screening level threshold of 1,100 MTCO_{2e}/yr is judged by the PCAPCD as having a less-than-significant impact

¹¹ California Air Resources Board. *The Advanced clean Cars Program*. Available at <https://www.arb.ca.gov/msprog/acc/acc.htm>. Accessed February 7, 2018.

¹² Placer County Air Pollution Control District. *California Environmental Quality Act Thresholds of Significance: Justification Report*. October 2016.

related to GHG emissions, and would not conflict with any State or regional GHG emissions reduction goals. Projects that would result in GHG emissions above the 1,100 MTCO_{2e}/yr screening level threshold, but below the bright-line threshold of 10,000 MTCO_{2e}/yr, must result in GHG emissions below the efficiency thresholds in order to be considered to result in a less-than-significant impact related to GHG emissions and not conflict with any State or regional GHG emissions reduction goals. The GHG efficiency thresholds, which are in units of MTCO_{2e}/yr per capita or per square-foot, are presented in Table 17-5.

Table 17-5 PCAPCD Operational GHG Efficiency Thresholds of Significance			
Residential (MTCO_{2e}/capita)		Non-Residential (MTCO_{2e}/1,000 sf)	
Urban	Rural	Urban	Rural
4.5	5.5	26.5	27.3
<i>Source: Placer County Air Pollution Control District. Placer County Air Pollution Control District Policy. Review of Land Use Projects Under CEQA. October 13, 2016.</i>			

In accordance with CARB and PCAPCD recommendations, the County, as lead agency, uses the currently adopted PCAPCD GHG thresholds of significance as presented above. Therefore, if the proposed project results in construction GHG emissions in excess of 10,000 MTCO_{2e}/yr, and/or operational GHG emissions in excess of 1,100 MTCO_{2e}/yr and is unable to show that emissions would achieve the efficiency thresholds presented in Table 17-5, the project would be considered to result in a cumulatively considerable contribution to global climate change.

Methods and Assumptions

The proposed project’s GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 software - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model.

Project Construction GHG Emissions

Construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. Because GHG emissions from construction are temporary in nature and result in only short-term impacts, the PCAPCD uses the bright-line threshold of 10,000 MTCO_{2e}/yr for the analysis of land use project construction GHG emissions. As discussed in Chapter 5, Air Quality, of this EIR, construction of the proposed project was anticipated to occur in one phase over an approximately two-year construction period. Construction activity would involve demolition activity, off-haul of material from the project site, and off-site sewer line construction. Construction emissions were estimated

using CalEEMod and SMAQMD's Roadway Construction Emissions Model (RoadMod). Modeling results are included in Appendix C to this EIR.

Long-Term Operational GHG Emissions

As discussed in the Project Description chapter of this EIR, the proposed project includes construction and operation of 308 residential units over a 110.1-acre property. In addition to the 308 residential units, three on-site parks will also be provided. To provide a conservative analysis, the proposed project was assumed to be built out in a single phase, with operations beginning in 2020.¹³ The modeling performed for the proposed project included compliance with the California Building Energy Efficiency Standards Code. The proposed project's compliance with the California Building Energy Efficiency Standards Code would be verified as part of the County's building approval review process. The project-specific trip generation rates and resident vehicle miles travelled (VMT) provided by KD Anderson & Associates, Inc. were also applied to the project modeling.¹⁴ The project's inherent site and design features have been applied to the modeling as well. For example, the project would include construction of sidewalks throughout the project site, which would connect to existing off-site pedestrian infrastructure. The CO₂ intensity factor within CalEEMod were adjusted in order to reflect PG&E's progress towards the State RPS goal by 2020.

Additionally, each of the proposed residences would be designed with infrastructure necessary to support electric vehicle charging stations. Considering California's Advanced Clean Cars Program, which promotes the use of electric vehicles within the State, and the growing popularity of such vehicles,¹⁵ the provision of infrastructure necessary to provide electric vehicle charging stations would allow future residents of the project site to use electric vehicles. Electric vehicle use greatly reduces mobile sourced emissions; however, CalEEMod does not contain direct methods of accounting for increased electric vehicle usage in proposed projects. As such, to account for increased use of electric vehicles by future project residents, the VMT for the proposed project was reduced by two percent to reflect reductions in mobile source emissions due to electric vehicle usage.

As discussed above, the California Energy Commission recently approved updates to the proposed 2019 CBSC, which require new low-rise residential structures to include PV systems with sufficient capacity to generate an electrical output equal to or greater than the dwelling's annual electrical usage. The proposed structures are anticipated to be subject to the requirements of the 2019 CBSC, and, as such, would be required to include PV systems

¹³ It should be noted that since the initial receipt of construction information regarding the proposed project, sufficient time has passed such that the first units would not be completed until sometime in Year 2020, with construction of the remainder of the project units following thereafter. Assuming that the proposed project would be constructed and operated by 2020, however, provides for a conservative GHG analysis as CalEEMod assumes, based on existing state regulations, that emissions from construction-related and mobile sources would decrease in the future.

¹⁴ KD Anderson & Associates, Inc. *Traffic Impact Study for Mill Creek Subdivision*. October 19, 2017.

¹⁵ California Energy Commission. *Zero-Emission Vehicles and Infrastructure*. July 5, 2017.

sufficient to meet the project’s total electricity demand. The inclusion of such PV systems was assumed in the CalEEMod emissions estimation prepared for the proposed project.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results are included in Appendix C to this EIR.

Impacts and Mitigation Measures

The following discussion of GHG emissions impacts is based on implementation of the proposed project in comparison to the standards of significance presented above.

17-7 Generation of GHG emissions that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Based on the analysis below, the project’s incremental contribution to this significant cumulative impact is less than cumulatively considerable.

Buildout of the proposed project would contribute to increases of GHG emissions that are associated with global climate change during construction and operations. The proposed project’s short-term construction-related and long-term operational GHG emissions are presented below.

Short-Term Construction GHG Emissions

The results of the CalEEMod construction GHG emissions analysis are presented below in Table 17-6.

Table 17-6		
Unmitigated Project On-site Construction GHG Emissions		
Year	GHG Emissions (MTCO_{2e}/yr)	Threshold of Significance (MTCO_{2e}/yr)
2018	680.18	10,000
2019	1,588.76	10,000
2020	566.86	10,000

Source: CalEEMod, May 2018 (see Appendix C).

As shown in the table above, the project’s maximum annual emissions are anticipated to occur in the year 2019. However, even in 2019, the construction-related GHG emissions would be well below the PCAPCD’s bright-line threshold of 10,000 MTCO_{2e}/yr. Furthermore, off-site construction work related to sewer line improvements were estimated by RoadMod to involve the emission of approximately 717.13 MTCO_{2e}. If such emissions were to occur within 2019, the project’s maximum annual GHG emissions would equal 2,305.89 MTCO_{2e} in 2019. Considering the off-site construction emissions as well as on-site construction-related emissions, the proposed project would result in GHG emissions below the PCAPCD’s bright-line threshold of 10,000 MTCO_{2e}/yr. Because the proposed project’s construction-related GHG emissions would be below 10,000 MTCO_{2e}/yr, the

proposed project would not be expected to have a cumulatively considerable contribution to a significant cumulative GHG impact during construction.

Long-Term Operational GHG Emissions

The modeling assumptions for the proposed project’s operational GHG emissions are discussed in the Methods and Assumptions section above. The proposed project’s estimated operational GHG emissions at full buildout (2020) are presented in Table 17-7.

Table 17-7	
Unmitigated Project Operational GHG Emissions	
Emission Source	GHG Emissions (MTCO_{2e}/yr)
Area	3.83
Energy	427.14
Mobile	3,354.56
Solid Waste	160.44
Water	59.66
TOTAL ANNUAL GHG EMISSIONS	4,005.63
PCACPD Screening Level Threshold	1,100
<i>Source: CalEEMod, May 2018(see Appendix C).</i>	

As shown in the table, the proposed project would result in operational GHG emissions in excess of the 1,100 MTCO_{2e}/yr operational threshold of significance. Accordingly, the project must be further evaluated in comparison with the efficiency thresholds presented in Table 17-5. The efficiency thresholds rely on per capita MTCO_{2e}/yr emissions to determine significance for residential projects in rural or urban settings. In general, urban projects are considered to involve shorter vehicle trips, which would inherently reduce GHG emissions from mobile sources, while rural projects are considered to involve relatively longer vehicle trips and proportionally higher GHG emissions from mobile sources. In recognition of the inherent inequality between mobile source GHG emissions from rural and urban projects, PCAPCD established higher efficiency thresholds for rural projects as compared to urban projects (see Table 17-5 above). The PCAPCD directs lead agencies to determine whether a project is considered rural or urban. The proposed project is located within a generally rural portion of the DCWPCP region. Although the project site is currently within a rural portion of the DCWPCP, urban development exists to the south of the project site, and the City of Roseville exists to the east of the site. Therefore, the County has directed Raney to compare the GHG emissions from the proposed project to the urban efficiency threshold. The proposed project’s estimated per capita emissions are presented below in Table 17-8 and compared with the applicable PCAPCD efficiency threshold.

Table 17-8 Unmitigated Project Operational GHG Emissions Per Capita	
Project Emissions (MTCO_{2e}/yr/capita)	PCAPCD Efficiency Threshold for Urban Residential Projects (MTCO_{2e}/yr/capita)
4.18	4.5
Notes: As discussed in Chapter 13 of this EIR, the estimated population for the project at buildout is anticipated to be 958 residents based on a 3.11 persons per household rate for the DCWPCP area. Thus, the emissions efficiency rate for the project would be 4.18 (4,005.63 MTCO _{2e} /yr / 958 residents = 4.18 MTCO _{2e} /yr/capita).	

As shown in the table, the proposed project would result in operational GHG emissions below the applicable PCAPCD efficiency threshold. Therefore, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Consequently, the project would not result in a cumulatively considerable incremental contribution to impacts related to GHG emissions or climate change and the project's impact would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

Hazards and Hazardous Materials

17-8 Cumulative exposure to potential hazards and increases in the transport, storage, and use of hazardous materials. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts associated with hazardous materials related to implementation of the proposed project are analyzed in Chapter 9 of this EIR. All project-specific impacts related to hazards and hazardous materials were found to be less than significant with implementation of mitigation measures set forth in the chapter. Hazardous materials and other public health and safety issues are generally site-specific and/or project-specific, and would not be significantly affected by other development within the project area. Cumulative development projects would be subject to the same federal, State, and local hazardous materials management requirements as would the proposed project, which would minimize potential risks associated with increased hazardous materials use in the community. Therefore, impacts associated with hazardous materials transport, storage, and use associated with implementation of past, present, and reasonably foreseeable future projects, as well as the proposed project, would be *less than significant*.

Mitigation Measure(s)

None required.

Hydrology and Water Quality

17-9 Cumulative impacts related to water quality. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

Construction activities have the potential to affect water quality and contribute to localized violations of water quality standards if stormwater runoff from construction activities enters receiving waters. Additional runoff from construction sites could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such sediment or contaminants should enter receiving waters in sufficient quantities. Thus, construction activities associated with the proposed project, in combination with construction activities associated with other reasonably foreseeable projects in the DCWPCP, could result in cumulative impacts related to water quality.

Similar to the proposed project, cumulative development within the DCWPCP would be subject to Phase II MS4 stormwater requirements, including source control and treatment control features, as well as the State General Construction Permit. Specifically, regulated projects are required to divide the project area into drainage management areas (DMAs) and implement and direct water to appropriately-sized site design measures (SDMs) and Baseline Hydromodification Measures to each DMA. Source control measures must be designed for pollutant-generating activities or sources consistent with recommendations from the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and Redevelopment, or equivalent manual, and must be shown on Improvement Plans.

Based on the conceptual stormwater design, the proposed project would properly treat stormwater runoff prior to discharge from the site. Thus, urban pollutants entering and potentially polluting the local drainage system would not be expected to occur as a result of the project. A final drainage report would be required with submittal of the Improvement Plans for County review and approval to substantiate the preliminary report's low-impact development (LID) sizing calculations. In addition, per Phase II MS4 requirements, a Post Construction Stormwater Control Plan would be required for the proposed project. The project would be subject to National Pollutant Discharge Elimination System (NPDES) Construction General Permit requirements, including implementation of best management practices (BMPs) and preparation of a site-specific Stormwater Pollution Prevention Plan (SWPPP). Therefore, the project's incremental contribution to the significant cumulative impact would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

17-10 Cumulative impacts related to substantially altering the existing drainage pattern of the site or area, or creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is less than cumulatively considerable.

The cumulative geographic setting related to hydrology is the Dry Creek watershed, which drains approximately 101 square miles ranging from west of Auburn (Placer County) to south to Folsom (Sacramento County).¹⁶ Major tributaries to Dry Creek include: Antelope Creek, Secret Ravine, Miners Ravine, Strap Ravine Creek, Linda Creek, and Cirby Creek. Within the DCWPCP, Dry Creek is located approximately 0.34-mile to the north of the proposed project site. According to the DCWPCP, the hydrologic characteristics in the DCWPCP area are largely affected by seasonal rainfall. The majority of the watercourses in the project area are seasonal, and only support flows during the rainy season. However, Dry Creek flows year-round. Per the *Dry Creek Watershed Coordinated Resource Management Plan* (DCWCRMP), several areas within the watershed have degrading/unstable banks, incising streams, and are experiencing sedimentation of the streambed due, in part, to the modified flow regime caused by increases in impervious surface area that have occurred as a result of development activities in the area.

Per the County's Phase II MS4 permit, hydromodification management projects, such as the proposed project, are typically required to demonstrate hydromodification management of stormwater such that post-project runoff is maintained to equal or below pre-project flow rates for the 2-year, 24-hour storm event, generally by way of infiltration, rooftop, and impervious area disconnection, bio-retention, or other LID measures that result in post-project flows that mimic pre-project conditions. However, the Dry Creek Watershed Flood Control Plan notes that the use of local detention basins to limit peak runoff has the potential to result in higher overall peak flows within Dry Creek.¹⁷ Specifically, detaining flows in the lower portion of the Dry Creek Watershed, within which the project site is located, could delay the time when the peak flow occurs such that the peak flow would coincide with the arrival of peak flows from the upper portion of the watershed. Therefore, development of the proposed project, in conjunction with other projects, could result in significant cumulative impacts related to drainage and stormwater runoff.

As a means of minimizing impacts to Dry Creek occurring as a result of cumulative development in the area, the Dry Creek Watershed Drainage Improvement Zone Ordinance (Article 15.32 of the Placer County Code) establishes a drainage improvement zone for the Dry Creek watershed. In addition, the Ordinance requires the payment of specified fees and annual assessments as a condition of new development within the watershed area; such fees and assessments are used for the installation and maintenance of roadway drainage and stormwater drainage improvements. Mitigation fees are required for new development, and the expansion of existing development, within portions of the Dry Creek watershed

¹⁶ Placer and Sacramento Counties. *Dry Creek Watershed Coordinated Resource Management Plan*. December 31, 2003.

¹⁷ Placer County Flood Control and Water Conservation District. *Update to the Dry Creek Watershed Flood Control Plan* [pg. 66]. November 2011.

that impose a burden on the creeks and drainage infrastructure within the watershed by adding additional impervious surface and accelerating runoff, thereby increasing discharge rates. The proposed project, as well as other cumulative development in the Dry Creek Watershed, would be required to comply with Placer County's Dry Creek Watershed Drainage Improvement Ordinance. Payment of such fees would help to fund future drainage facility improvement projects within the Dry Creek watershed.

As noted in Chapter 10, Hydrology and Water Quality, of this EIR, buildout of the proposed project with the proposed LID features would result in a slight increase in peak runoff during the two-year, 10-year, 25-year, and 100-year return frequency storm events. However, peak flows occurring under buildout of the proposed project would be considerably less than flows occurring under buildout of the project site per the current DCWPCP land use designations. In some cases, peak flows would be less under buildout of the proposed project compared to existing conditions, although volumes would generally increase for all sheds under the proposed project condition. It should be noted that peak flows for a 24-hour storm centered on the upper Dry Creek Watershed would reach Dry Creek within the project vicinity after peak runoff flows from the project site have already dissipated. Thus, the peak flows from the project site and the upper Dry Creek Watershed would not combine. Therefore, the project's contribution to cumulative increases in flows within the Dry Creek watershed would be relatively limited. Therefore, the incremental contribution to cumulative drainage and runoff impacts resulting from the proposed project would be considered *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

Land Use & Agricultural Resources

17-11 Cumulative land use and planning incompatibilities. Based on the analysis below, the cumulative impact is *less than significant*.

The geographic context for the cumulative analysis of land use compatibility impacts is the DCWPCP area. Cumulative development within the DCWPCP area, including the proposed project, would result in increased residential development intensity near rural residential and industrial land uses and open space areas. The proposed project, along with reasonably foreseeable projects within the DCWPCP area and unincorporated Placer County, would change the intensity of land uses within the geographic area that would be affected by the proposed project. As stated previously, the proposed project requires the approval of a General Plan Amendment (GPA) of the DCWPCP from LDR, C, I, and GOS designations to MDR and GOS. In addition, a rezone would be required to change the zoning of the site from RS-AG-B-20, OP-DC, INP-DC, IN-UP-DC, and O to Residential Single Family, minimum Building Site of 6,000 square feet (RS-B-6) and O.

As discussed in Chapter 11, Land Use and Agricultural Resources, of this EIR, the existing industrial uses to the east of the project site would be separated from the proposed residences by approximately 250 feet or more. In addition, these two uses (existing

industrial to east and proposed project residences) would be buffered by the dense vegetation associated with the existing riparian corridor along the project site's eastern boundary. To the south of the site, the northern property line of Roseville Storage would be set back approximately 58 feet from the side property line of the nearest proposed on-site residences, and a 10-foot, landscaped sound wall would be constructed at the common property line between the two land uses. Therefore, with approval of the proposed GPA discussed in Chapter 11, the proposed project would be consistent with the County's industrial/residential buffer requirements. Furthermore, as shown in Table 11-6 of the Land Use and Agricultural Resources chapter of this EIR, the proposed project would be generally consistent with relevant policies in the Placer County General Plan and the DCWPCP.

Similar to the proposed project, all future development within the DCWPCP area would be required to conform to the guidelines and policies contained in the Placer County Code, the Placer County General Plan, and the Placer County Design Guidelines, which would reduce or avoid land use compatibility conflicts. Furthermore, none of the planned projects within the DCWPCP would contribute to localized land use compatibility conflicts within the project vicinity. Therefore, a significant adverse cumulative effect with regard to land use compatibility associated with implementation of past, present, and reasonably foreseeable future projects, as well as the proposed project, would not occur, and the cumulative impact would be *less than significant*.

Mitigation Measure(s)

None required.

17-12 Involve other changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use. Based on the analysis below, even with the implementation of mitigation, the project's incremental contribution to this significant cumulative impact is *cumulatively considerable and significant and unavoidable*.

The Placer County General Plan EIR concluded that the County's General Plan would bring about changes to the existing land use in the unincorporated areas of the County. In addition, the buildout scenario presented in the DCWPCP presupposed that land uses would change as a result of growth and development occurring under buildout of the DCWPCP. Both the Placer County General Plan EIR and the DCWPCP anticipated that the conversion of existing farmland in the region to urban use would result in the loss of agricultural production. While the Placer County General Plan EIR stated that the loss of farmland and agricultural production was considered a significant adverse impact, the EIR did not provide mitigation measures to reduce the adverse impact to a less-than-significant level.

As discussed in Chapter 11, Impact 11-4, of this EIR, the proposed project site does not contain Prime Farmland, Farmland of Statewide Importance, or land used for livestock grazing, and, thus, such land would not be converted to non-agricultural or non-forest use. In addition, the proposed project site is not zoned or designated for agricultural use.

However, the site contains 16.5 acres of Unique Farmland that would be converted to residential uses as part of the proposed development. Therefore, the proposed project would contribute to the cumulative loss of Unique Farmland in the region.

The DCWPCP recognizes that areas to the south of Dry Creek, including the proposed project site, were designated for urban use in the near term, as a means of reducing development pressure on agricultural lands to the north and west of Dry Creek.¹⁸ The loss and conversion of agricultural lands, including lands within the project site, was identified as a significant and unavoidable impact of development in the Final EIR for the adopted DCWPCP. The aforementioned conclusion was included in the Placer County Board of Supervisors' Statement of Overriding Considerations adopted in 1990, in conjunction with the certification of the Final EIR and adoption of the DCWPCP.

Based on the above, development of the proposed project in combination with other proposed and pending projects in the DCWPCP area and unincorporated Placer County would result in impacts associated with the conversion of Unique Farmland to non-agricultural use. Therefore, the proposed project's incremental contribution to significant cumulative impacts would be *cumulatively considerable* and *significant*.

Mitigation Measure(s)

As discussed previously, implementation of Mitigation Measure 11-5 in Chapter 11 of this EIR would permanently protect an amount of Farmland equal to that which would be converted to non-agricultural uses for the proposed project, but would not prevent the direct loss of Unique Farmland on the project site. Because the proposed project would convert Unique Farmland to non-agricultural uses, the project's incremental contribution to significant cumulative impacts would remain *cumulatively considerable* and *significant and unavoidable*.

17-12 *Implement Mitigation Measure 11-5.*

Noise

17-13 Result in exposure of persons to or generation of traffic noise levels in excess of standards established in the local General Plan, Community Plan or noise ordinance, or applicable standards of other agencies, or a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

Future development projects within the DCWPCP area, including the proposed project, would incrementally affect the future cumulative ambient noise environment. To assess noise impacts due to project-related traffic increases on the existing local roadway network, noise levels have been calculated for the Cumulative Plus Project Condition (see Table 17-9) using the assumptions and methodology presented in Chapter 12, Noise, of this EIR.

¹⁸ Placer County. *Dry Creek-West Placer Community Plan* [pg. 46]. Amended May 12, 2009.

**Table 17-9
Cumulative Plus Project Traffic Noise Levels**

Roadway	Segment	Noise Levels (L_{dn} , dB) at Outdoor Activity Areas of Nearest Sensitive Receptors				
		Cumulative (2035)	Cumulative (2035) Plus Project	Change	Significance Criteria	Significant? (Y/N)
PFE Road	Watt Avenue to Walerga Road	65.1	65.2	+0.1	+1.5	No
PFE Road	Walerga Road to Oly Lane	65.1	65.2	+0.1	+1.5	No
PFE Road	Oly Lane to Cook Riolo Road	65.4	65.5	+0.1	+1.5	No
PFE Road	Cook Riolo Road to Antelope Road	67.2	67.4	+0.2	+1.5	No
PFE Road	Antelope Road to Hilltop Road	68.9	69.1	+0.2	+1.5	No
Cook Riolo Road	Baseline Road to Vineyard Road	63.1	63.3	+0.2	+1.5	No
Cook Riolo Road	Vineyard Road to Creekview Ranch Elementary School (CRES)	64.4	64.5	+0.1	+1.5	No
Cook Riolo Road	CRES to PFE Road	63.6	63.8	+0.2	+1.5	No
Cook Riolo Road	South PFE Road	48.0	48.0	+0.0	+5.0	No
Antelope Road	PFE Road to Great Valley Drive	69.4	69.6	+0.2	+1.5	No
Antelope Road	Great Valley Drive to Poker Lane	69.6	69.7	+0.1	+1.5	No

Source: j.c. brennan & associates, Inc., 2017.

As shown in Table 17-9, some noise sensitive receptors located along roadways in the project vicinity are currently exposed to exterior traffic noise levels that exceed the County's 60 decibel (dB) day-night average (L_{dn}) General Plan exterior noise level standard for residential uses. Such receptors would continue to experience exterior noise levels that exceed the County exterior noise level standards under the Cumulative Plus Project condition. However, the proposed project's contribution to traffic noise increases would be primarily less than 1 dB L_{dn} , which is the threshold at which noise level increases are perceptible to the human ear. In addition, all project-related traffic noise increases would be below the applicable FICON threshold for substantial noise level increases (see Table 12-7 in Chapter 12, Noise, of this EIR).

Modern construction typically provides a 25 dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB L_{dn} , or less, will typically comply with the County's 45 dB L_{dn} interior noise level standard. Exterior noise levels at the nearest sensitive receptors would be less than 70 dB L_{dn} , and, thus, typical interior noise levels would be less than 45 dB L_{dn} . Therefore, interior noise levels at existing residences in the project vicinity would not exceed the County's interior noise level standard of 45 dB L_{dn} under the Cumulative Plus Project scenario.

Based on the above, project-generated traffic noise at existing sensitive receptors in the project vicinity would not conflict with the County's applicable noise level thresholds under the Cumulative Plus Project Condition. In addition, the proposed project's contribution to cumulative traffic noise increases would be below the applicable FICON thresholds, as shown in Table 17-9.

As such, the project would not cause a substantial permanent increase in ambient noise levels in the project vicinity above cumulative conditions. Thus, the proposed project's incremental contribution to significant cumulative impacts related to traffic noise levels would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

Population and Housing

17-14 Cumulative population growth and displacement of substantial numbers of existing housing. Based on the analysis below, the cumulative impact is *less than significant*.

As discussed in Impact 13-2 of Chapter 13, Population and Housing, within this EIR, only two permanent single-family residential units are currently located on the project site, and implementation of the proposed project would result in the displacement of approximately six residents. The project would only include development of the project site and would not result in the cumulative displacement of any residences not currently located on the project site.

Buildout of the DCWPCP was anticipated to result in population growth within the plan area through the buildout of urban and rural developments throughout the DCWPCP, including the project site. Since approval of the DCWPCP, the Placer Vineyards Specific Plan and Riolo Vineyards Specific Plan have been approved, which have increased the amount of land designated for urban development within the DCWPCP area. The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), prepared by the Sacramento Area Council of Governments (SACOG), provides regional growth projections for the six-county Sacramento region, including the DCWPCP.

The MTP/SCS identifies the portions of the DCWPCP, excluding the Riolo Vineyards and Placer Vineyards Specific Plan areas, as Established Communities. As discussed within Impact 13-1, of Chapter 13, within this EIR, the population growth related to implementation of the proposed project has been anticipated for the region by the MTP/SCS. Concurrently, the MTP/SCS explicitly anticipates growth within the Developing Communities of Placer Vineyards and Riolo Vineyards within the total growth anticipated for Placer County.¹⁹ Thus, the DCWPCP anticipated cumulative growth of the plan area, and increased urbanization within the DCWPCP area has been anticipated by regional planning such as the MTP/SCS. Because development of the project site, and buildout of the DCWPCP has been anticipated in regional development forecasts, buildout of the proposed project in combination with other approved developments within the project area would not result in a significant cumulative contribution to population growth within the region.

It should be noted that population growth itself does not constitute a significant physical environmental effect. Rather, the determination of significance is based on whether population growth could result in indirect impacts from associated development. As such, the cumulative analysis within this chapter evaluates the physical environmental impacts of cumulative development in each of the resource discussions included herein.

Considering the above, implementation of the proposed project, in combination with future development occurring under buildout of the DCWPCP, would result in a ***less-than-significant*** cumulative impact related to population growth and the cumulative displacement of substantial numbers of existing residents.

Mitigation Measure(s)

None required.

¹⁹ Sacramento Area Council of Governments. 2016 *Metropolitan Transportation Plan/Sustainable Communities Strategy* [Appendix E-3, pg. 159]. Adopted February 18, 2016.

Public Services and Recreation

17-15 Cumulative impacts to public services. Based on the analysis below, the cumulative impact is *less than significant*.

Potential cumulative impacts related to fire and sheriff protection services, schools, public services and government facilities, and parks and recreation are discussed below.

Fire Protection Services

Neither the Placer County General Plan EIR nor the DCWPCP EIR identified cumulative impacts related to fire protection. Rather, impacts were determined to be reduced to less-than-significant levels through implementation of the goals and policies included in the General Plan and DCWPCP. Such policies require provision of adequate funding and an adequate water supply as a component of new development approval.

As discussed in Chapter 14, Public Services and Recreation, of this EIR, the response times for the proposed project would be consistent with General Plan Policy 4.4.2, and CAL FIRE would be capable of serving the project site with existing equipment and facilities. In addition, the project would be required to pay a Fire Facilities Fee to Placer County Fire (PCF). The development impact fee is calculated based on a “fair share portion” of anticipated capital needs through 2060. In addition, development within the proposed project site, as well as other future development throughout Placer County and the DCWPCP area, would be required to comply with all applicable regulations imposed by PCF and the California Fire Code, as adopted by Section 15.04.510 of the Placer County Code. Based on the above, the proposed project would result in a less-than-significant cumulative impact related to fire protection services.

Sheriff Protection Services

Neither the Placer County General Plan EIR nor the DCWPCP EIR identified cumulative impacts related to sheriff protection services. Rather, impacts were determined to be reduced to less-than-significant levels through implementation of the goals and policies included in the General Plan and DCWPCP. Policy 4.H.1 of the Placer County General Plan sets a response time goal of eight minutes for suburban areas such as the DCWPCP area.

The Placer County Sheriff’s Office has indicated that new or physically altered law enforcement facilities would not be needed to adequately serve the proposed project.²⁰ In addition, though response times are dependent upon the location of patrol officers at the time of the emergency call, on average, response times to the project site would be anticipated to be within the Placer County General Plan’s eight-minute response time standard for suburban areas. As a result, the proposed project would not result in a need for

²⁰ Barnhart, Josh, Lieutenant at the Placer County Sheriff’s Office. Personal communication [phone] with Nick Pappani, Vice President, Raney Planning & Management, Inc. December 20, 2017.

new, or improvements to existing, sheriff protection facilities, construction of which could cause significant environmental impacts. Similar to the proposed project, other future development within the region would be required to address impacts related to sheriff protection services on a project-by-project basis. Based on the above, the proposed project, in combination with future development occurring under buildout of Placer County, would have a less-than-significant impact to sheriff protection services.

Schools

Cumulative buildout within the County and surrounding area could result in overcrowding at schools in the area. However, each individual development would be required to pay SB 50 school impact fees, similar to the proposed project, which would contribute to the facilitation of school expansions in order to serve the needs of the area. As discussed in Chapter 14, Public Services and Recreation, of this EIR, the Dry Creek Joint Elementary School District (DCJUESD) has adequate capacity to serve the students that would be generated by the proposed project, and the project would not contribute a significant number of students to the Roseville Joint Union High School District (RJUHSD), which is currently over capacity. Furthermore, according to SB 50, payment of the necessary school impact fees for the project would be considered full and satisfactory CEQA mitigation. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any “[...] legislative or adjudicative act [...] involving [...] the planning, use, or development of real property” (Government Code 65996(b)). Therefore, the proposed project, in combination with future development occurring under buildout of Placer County, would result in a less-than-significant cumulative impact related to the need for new, or improvements to existing, school facilities.

Public Facilities and Government Services

As discussed above, while project-generated traffic could result in an incremental increase in maintenance of County roads in the project area, such an increase would be negligible. Similarly, given the size of the proposed development, any additional demand on libraries or other public facilities and services generated by the proposed project would be relatively minor, and is not likely to result in the alteration of existing facilities or the construction of new facilities. The proposed project, as well as other development in the unincorporated County, would be required by the County to pay Development Impact Fees, which would help to fund and sustain public facilities and services, including public roads, within Placer County. The proposed project, in combination with future development occurring under buildout of the DCWPCP, would result in a less-than-significant cumulative impact related to such.

Parks and Recreation

The proposed project would include the provision of on-site private parks, and would not result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of such facilities would

occur or be accelerated. Per Article 15.34 of the Placer County Code, future development projects within unincorporated Placer County, including the proposed project, would be required to pay a parks and recreational facility fee. The purpose of the park and recreation facilities impact fee is to provide funding for expansion of park land and recreation facilities required to serve new development in unincorporated Placer County. Furthermore, the proposed project would provide 4.2 acres of on-site parks, which would exceed the County's requirement of five acres of park land per 1,000 residents (Section 16.08.100 of the Placer County Code and General Plan Policy 5.A.1), assuming an average household size of 2.54 persons. As noted in Chapter 13, Population and Housing, of this EIR, the U.S. Census Bureau identifies an average household size of 3.11 persons per household for the DCWPCP area;²¹ however, the 2.54 persons per household figure is used for the purposes of determining park land requirements in order to maintain consistency with *Placer County Park and Recreation Facilities Fee Study*.²² Future development within the DCWPCP would similarly be required to comply with the County's park dedication/in-lieu fee standards. Therefore, the proposed project, in combination with future buildout in the County, would result in a less-than-significant cumulative impact related to parks and recreation.

Conclusion

Based on the above, the proposed project, in combination with future development occurring under buildout of the DCWPCP, would result in a *less-than-significant* cumulative impact related to public services and recreation.

Mitigation Measure(s)

None required.

Transportation and Circulation

The following section discusses the cumulative transportation and circulation conditions associated with the proposed project. The information contained within this section is based on the Traffic Impact Analysis prepared for the proposed project by KD Anderson & Associates, Inc. (see Appendix L).²³ The Traffic Impact Study include an analysis of traffic operations under the following cumulative scenarios:

- **Cumulative No Project Condition:** Traffic volumes associated with cumulative (year 2035) buildout of the project region without traffic generated by the proposed project. The Cumulative No Project Condition includes reasonably certain projected changes to intersection geometry and roadway segments. It should be noted that the Cumulative No Project Condition does not include any new development on the project site, including development that could occur per the existing land use and zoning designations.

²¹ U.S. Census Bureau, Census 2010 Summary File. ESRI Converted Census data. April 06, 2017.

²² Placer County. *Placer County Park and Recreation Facilities Fee Study*. September 2003.

²³ KD Anderson & Associates, Inc. *Traffic Impact Analysis for Mill Creek Subdivision, Placer County, California*. January 17, 2018.

- **Cumulative Plus Project Condition:** Traffic associated with the Cumulative No Project Condition plus traffic generated by the proposed project under full buildout.

The Cumulative condition reflects current land use assumptions for development in the DCWPCP area as forecast in the County's most recent regional traffic model, which was last updated for the *Placer Vineyards Specific Plan EIR*. The traffic model was modified to include the proposed project, and forecasts made with proposed site land uses represent the Cumulative Plus Project Condition. The Cumulative No Project Condition was identified by manually subtracting the proposed project's trips from the Cumulative Plus Project Condition.

Roadways in 2035 are generally projected to expand in the project area. Table 17-10 and Table 17-11 identify the projected changes to roadway segments and intersection geometry, respectively, as identified by Placer County staff. The improvements leading to such geometrics are included in adopted fee programs or are conditions of approval for approved projects. Therefore, completion of the improvements is reasonably certain. Figure 17-1 presents background long term Cumulative No Project Condition traffic volumes at study intersections, while Figure 17-2 presents volumes with implementation of the proposed project.

Cumulative Impacts and Mitigation Measures

Cumulative impacts of the proposed project on the transportation and circulation system are discussed below. Each impact is followed by recommended mitigation measures, if necessary, to reduce the significance of identified impacts. It should be noted that a detailed overview of the applicable level of service (LOS) thresholds for study intersections and roadways is provided in Chapter 15, Transportation and Circulation, of this EIR.

- 17-16 Study intersections under the Cumulative Plus Project Condition. Based on the analysis below and with implementation of mitigation, the impact to PFE Road/Antelope Road is less than significant. However, given the lack of feasible mitigation, impacts to the Cook Riolo Road/Vineyard Road and PFE Road/Cook Riolo Road intersections are significant and unavoidable.**

Table 17-12 below summarizes operations at each of the study intersections under the Cumulative No Project and Cumulative Plus Project Conditions during AM and PM peak hours. Where deficient conditions are projected with and without the addition of project traffic, the significance of project impact is based on the incremental change in delay or V/C caused by the project. It should be noted that for study intersections within the DCWPCP where LOS E or F operations have been previously anticipated for cumulative conditions, any worsening of LOS E or F conditions as measured by increased V/C of 0.05 for roadways and signalized intersections or by increased delay of 5.0 seconds for unsignalized intersections would result in a significant impact.

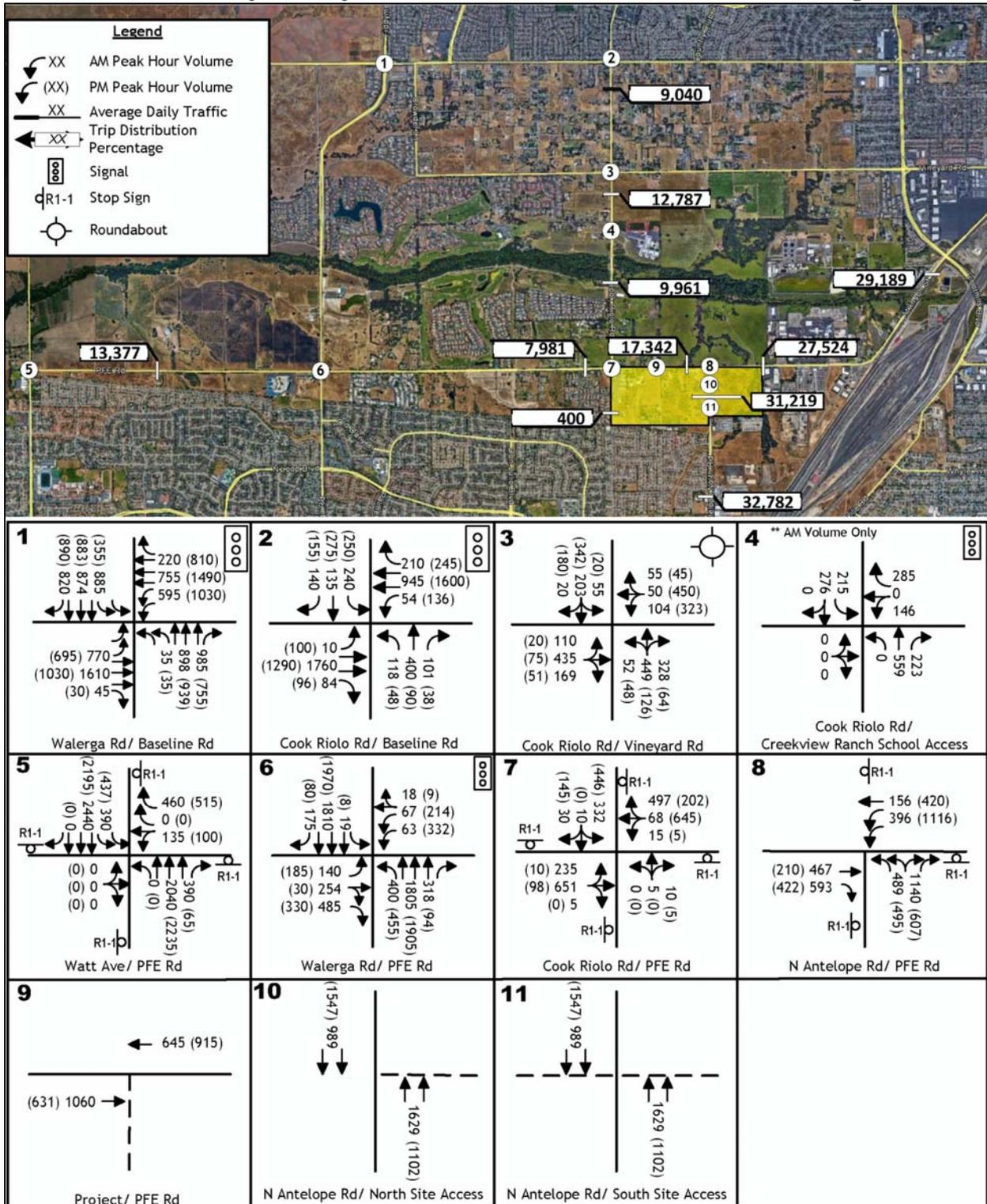
As shown in Table 17-12, the following intersections would operate unacceptably under the Cumulative Plus Project Condition and would experience a substantial increase in delay or V/C, resulting in a significant impact:

Table 17-10 Cumulative Intersection Geometry					
Intersection	Control	Northbound	Southbound	Eastbound	Westbound
1. Baseline Rd./Walerga Rd./Fiddymment Rd.	Signal	2 left lanes 3 through lanes 1 right lane	2 left lanes 3 through lanes 1 right lane	2 left lanes 3 through lanes 1 right lane	2 left lanes 3 through lanes 1 right lane
2. Baseline Rd./Cook Riolo Rd./Woodcreek Oaks Blvd	Signal	1 left lane 2 through lanes 1 right lane	1 left lane 2 through lanes 1 right lane	1 left lane 2 through lanes 1 right lane	1 left lane 2 through lanes 1 right lane
3. Cook Riolo Rd./Vineyard Rd.	Single lane Roundabout	1 lane	1 lane	1 lane	1 lane
4. Cook Riolo Rd./Creekview Ranch School	No Change to Existing Geometry				
5. PFE Rd./Watt Ave.	Signal	1 left lane 3 through lanes 1 right lane	2 left lanes 3 through lanes 1 right lane	1 shared left-through-right lane	1 shared through-left lane 2 right turn lanes
6. PFE Road/Walerga Rd.	Signal	1 left lane 3 through lanes 1 right lane	1 left lane 3 through lanes 1 right lane	1 left lane 1 shared through-right lane 1 right turn lane	2 left lanes 1 shared through-right lane
7. PFE Rd./Cook Riolo Rd.	No Change to Existing Geometry				
8. PFE Road/Antelope Rd.	Signal	1 left turn lane 1 shared left-right lane 1 right turn lane	N/A	1 through lane 1 right turn lane	2 left turn lanes 1 through lane
<i>Source: KD Anderson & Associates, Inc., 2018.</i>					

Table 17-11			
Cumulative Roadway Geometry/Classification			
Roadway	Segment	Classification	Lanes
PFE Rd.	Watt Ave. to Walerga Rd.	Arterial – Low Access Control	4
	Walerga Rd. to Cook Riolo Rd.	Arterial – Low Access Control	2
Cook Riolo Rd.	Cook Riolo Rd. to N. Antelope Rd.	Arterial – Low Access Control	2
	N. Antelope Rd. to Hilltop Rd.	Arterial – Moderate Access Control	4
	Baseline Rd to Vineyard Rd.	Arterial – Low Access Control	2
Antelope Rd.	Vineyard Rd. to CRS	Arterial – Low Access Control	2
	CRS to PFE Rd.	Arterial – Low Access Control	2
	south of PFE Rd.	Level Terrain Rural Highway	2
	PFE Rd. to Great Valley Dr.	Arterial – Moderate Access Control	4
	Great Valley Dr. to Poker Ln.	Arterial – Moderate Access Control	4

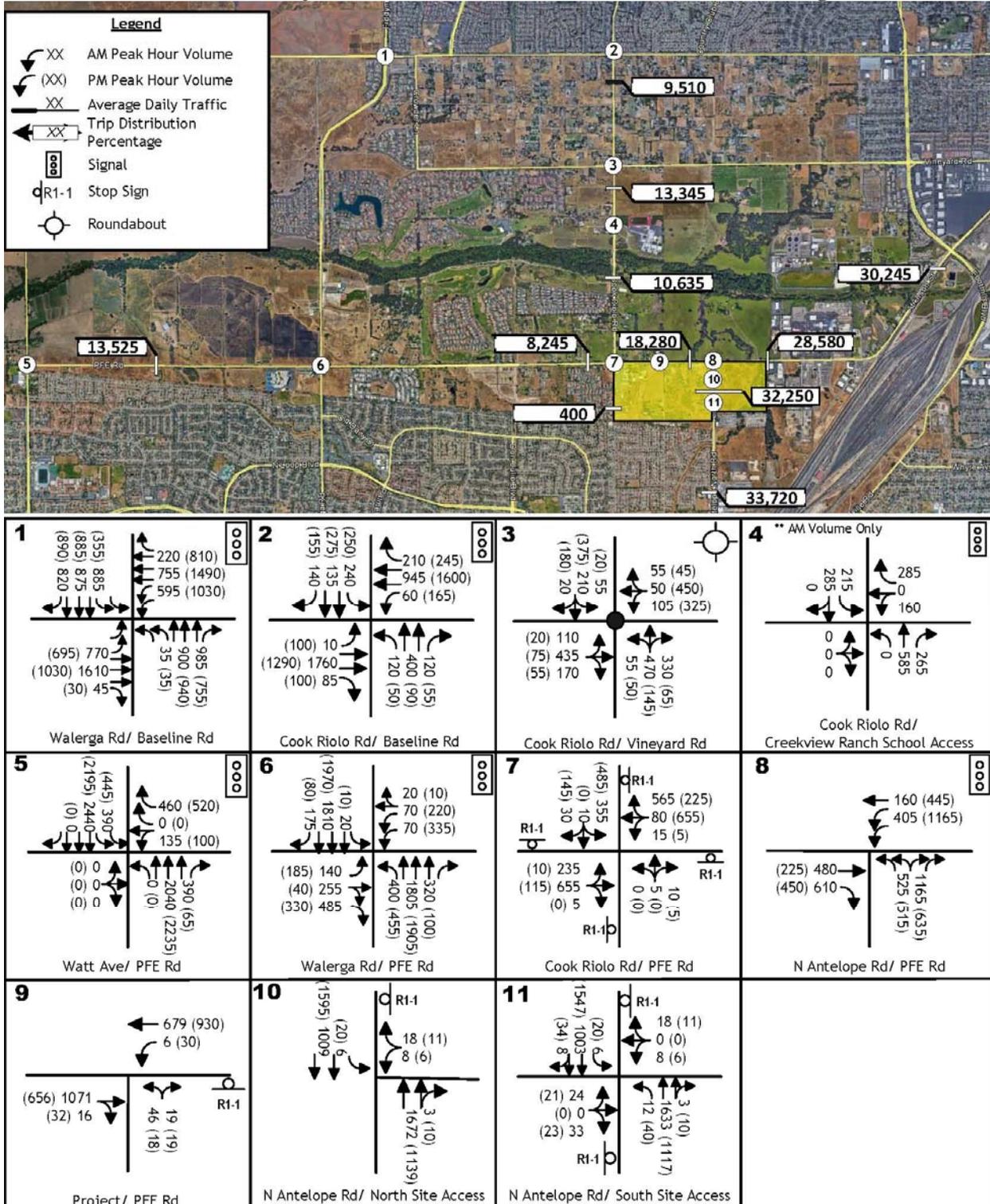
Source: KD Anderson & Associates, Inc., 2018.

**Figure 17-1
Cumulative (No Project) Project Condition Traffic Volumes and Lane Configurations**



Source: KD Anderson & Associates, Inc., 2018.

Figure 17-2
Cumulative Plus Project Condition Traffic Volumes and Lane Configurations



Source: KD Anderson & Associates, Inc., 2018.

**Table 17-12
Study Intersection LOS – Cumulative Plus Project Condition**

Intersection	Control	AM Peak Hour				PM Peak Hour				Peak Hour Signal Warrant Met?
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project		
		LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	LOS	Average Delay or V/C	
1. Baseline Rd./Walerga Rd./Fiddymment Rd.	Signal	F	183.0	F	183.0	F	114.6	F	114.6	N/A
2. Baseline Rd./Cook Riolo Rd./Woodcreek Oaks Blvd.	Signal	F	90.3	F	91.6	D	41.3	D	42.7	N/A
3. Cook Riolo Rd./Vineyard Rd.	Roundabout	F	92.4	F	102.1	D	47.0	E	61.9	N/A
4. Cook Riolo Rd./ Creekview Ranch School	Signal	D	0.808	D	0.828	N/S				N/A
5. PFE Rd./Watt Ave.	Signal	D	0.849	D	0.849	E	0.939	E	0.944	N/A
6. PFE Rd./Walerga Rd.	Signal	<i>F</i>	<i>1.156</i>	<i>F</i>	<i>1.161</i>	<i>F</i>	<i>1.201</i>	<i>F</i>	<i>1.209</i>	N/A
7. PFE Rd./Cook Riolo Rd.	AWS	<i>F</i>	<i>222.09</i>	F	249.5	<i>F</i>	<i>179.3</i>	F	204.6	Yes
8. PFE Rd./Antelope Rd.	Signal	<i>F</i>	<i>1.050</i>	<i>F</i>	<i>1.076</i>	<i>F</i>	<i>1.042</i>	F	1.095	N/A
9. PFE Rd/Project Access • (Overall) • Northbound approach • Westbound left turn	NB Stop			(C) C B	(22.1) 23.1 11.2			(B) C A	(14.8) 19.2 9.3	No
10. Antelope Road/North Access • (Overall) • Southbound Left turn • Westbound approach	WB Stop			(D) C D	(25.9) 16.0 28.2			(C) B C	(15.9) 22.8 20.7	No
11. Antelope Road/South Access • (Overall) • Northbound Left turn • Southbound Left turn • Eastbound approach • Westbound approach	EB/WB Stop			(C) B C C D	(24.0) 10.8 15.6 23.2 33.8			(D) C B F D	(33.6) 16.2 11.6 64.3 26.5	No

Notes:

- **Bold** indicates applicable LOS threshold exceeded.
- **Highlighted** indicates a significant impact.
- *Italic* indicates LOS E or F is acceptable per the DCWPCP.
- AWS = all-way stop.
- N/S = not studied during PM peak hour.
- Average delay is presented in seconds per vehicle.
- (Overall) average delay = $\Sigma (\text{LOS} \times \text{Volume of each delayed movement}) / \Sigma \text{Volume of each delayed movement}$.

Source: KD Anderson & Associates, Inc., 2018.

- The Cook Riolo Road/Vineyard Road intersection would operate with LOS F conditions in the AM peak hour with and without the project, assuming a single-lane roundabout is installed. During the PM peak hour, conditions would worsen from LOS D (acceptable) to LOS E (unacceptable) with implementation of the proposed project. The significance of the project's impact is based on the incremental change in delay. Because the change caused by the project exceeds the DCWPCP permissible increment of 5.0 seconds, a significant impact could occur.
- The PFE Road/Cook Riolo Road intersection would operate at LOS F conditions in the AM and PM peak hours with and without the project. However, LOS F has been previously anticipated and accepted per the DCWPCP. The significance of the project's impact is based on the incremental change in delay. The project would increase delay by 27.4 seconds during the AM peak hour and 25.3 seconds during the PM peak hour. Because the change caused by the project exceeds the DCWPCP permissible increment of 5.0 seconds during the AM and PM peak hours, a significant impact could occur.
- The PFE Road/Antelope Road intersection would operate at LOS F in the AM and PM peak hours with and without the proposed project. While LOS F has been previously anticipated and accepted for the intersection per the DCWPCP, the increase in V/C caused by the proposed project during the PM peak hour of 0.053 would exceed the 0.05 V/C standard established by the DCWPCP. Therefore, a significant impact could occur.

The intersections listed below would operate unacceptably under the Cumulative Plus Project Condition, but would not experience a substantial increase in delay or V/C. Thus, impacts to the following intersections would be less than significant:

- The PFE Road/Watt Avenue intersection would operate at LOS E in the PM peak hour with and without the project. With the addition of project traffic, the V/C at the intersection would increase by 0.005 during the PM peak hour and would remain unchanged during the AM peak hour. Thus, the intersection would not experience an overall V/C increase of 0.05 or more, and a less-than-significant impact would occur.
- The PFE Road/Walerga Road intersection is projected to operate at LOS F in the AM and PM peak hours with and without the project. However, LOS F has been anticipated and accepted for the intersection per the DCWPCP. With the addition of project traffic, the V/C at the intersection would increase by 0.005 during the AM peak hour and 0.008 during the PM peak hour. Because the incremental change in V/C caused by the project is less than the 0.05 V/C standard established by the DCWPCP, a less-than-significant impact would occur.
- The City of Roseville's Baseline Road/Walerga Road/Fiddymont Road intersection would operate at LOS F with and without the project. However, because the project would not cause a change in delay at the intersection, the project would not exceed the 12.5 second increment increase allowed per City of Roseville LOS standards. Thus, a less-than-significant impact would occur.

- The City of Roseville's Baseline Road/Cook Riolo Road/Woodcreek Oaks Blvd intersections would operate at LOS F in the AM peak hour and LOS D in the PM peak hour with and without the proposed project. Because the proposed project would not worsen the LOS during either peak hour, a less-than-significant impact would occur.
- The eastbound approach of the proposed Antelope Road/South Access intersection is projected to operate at LOS F with a delay of 53.0 seconds. However, minimum LOS standards apply to overall average delay, which is 24.0 seconds (LOS C) during the AM peak hour and 33.6 seconds during the PM peak hour. Therefore, considering the projected overall delay for the intersection, the County's minimum LOS D standard would be satisfied, and a less-than-significant impact would occur.

Conclusion

Based on the above, the proposed project could result in a *significant* cumulative impact to the following study intersections under the Cumulative Plus Project Condition:

- Cook Riolo Road/Vineyard Road (Intersection #3);
- PFE Road/Cook Riolo Road (Intersection #7); and
- PFE Road/Antelope Road (Intersection #8).

Mitigation Measure(s)

Implementation of the following mitigation measure would improve the V/C at the PFE Road/Antelope Road intersection to 0.923, which would result in LOS E conditions. Thus, operations would comply with the LOS standards set by the DCWPCP, and the impact to the PFE Road/Antelope Road intersection would be reduced to a less-than-significant level.

However, feasible improvements are not available for the Cook Riolo Road/Vineyard Road and PFE Road/Cook Riolo Road intersections. While addition of a two-lane roundabout at the Cook Riolo Road/Vineyard Road intersection would improve operations to an acceptable level, such an improvement is not identified in an existing fee program and would not be consistent with the DCWPCP. With respect to the PFE Road/Cook Riolo Road intersection, future improvements are not identified for the intersection in the County's CIP. The County has indicated that physical improvements at the intersection necessary to fix operations are not feasible due to a lack of sufficient right-of-way. As such, impacts to both intersections would remain *significant and unavoidable*.

17-16(a) Prior to issuance of any building permits, the project applicant shall fully fund the installation of an eastbound to southbound overlap phase at the PFE Road/Antelope Road traffic signal that is proposed in the Capital Improvement Program.

17-16(b) *Prior to issuance of any Building Permits, this project shall be subject to the payment of traffic impact fees that are in effect in this area (Dry Creek), pursuant to applicable Ordinances and Resolutions. The applicant is notified that the following traffic mitigation fee(s) shall be required and shall be paid to Placer County DPWF:*

- A. *County Wide Traffic Limitation Zone: Article 15.28.010, Placer County Code*
- B. *South Placer Regional Transportation Authority (SPRTA)*
- C. *"Bizz Johnson" Highway Interchange Joint Powers Authority*
- D. *Placer County / City of Roseville JPA (PC/CR)*

The current total combined estimated fee is \$1,460,844. The fees were calculated using the information supplied. If the use or unit count changes, then the fees will change. The actual fees paid will be those in effect at the time the payment occurs. (DPWF)

17-17 Study roadway segments under the Cumulative Plus Project Condition. Based on the analysis below and the lack of feasible mitigation, the impact to the segment of PFE Road from Cook Riolo Road to Antelope Road is significant and unavoidable.

Table 17-13 below summarizes operations at each of the study roadway segments under the Cumulative Plus Project Condition during AM and PM peak hours. As shown in the table, development of the proposed project would increase the volume of traffic along the study roadway segments beyond traffic occurring under the Cumulative No Project Condition.

The PFE Road from Cook Riolo Road to Antelope Road roadway segment would operate at LOS F with and without the proposed project. While LOS F is anticipated and considered acceptable for the roadway per the DCWPCP, the change in V/C caused by the project would exceed the established 0.05 significance threshold and the increase in traffic volume caused by the project would exceed the 100 daily vehicles per lane allowed under County guidelines. Therefore, a significant impact could occur.

All other study roadway segments would continue to operate within accepted Placer County and Sacramento County minimum LOS thresholds. However, given that the proposed project would substantially worsen operations of PFE Road from Cook Riolo Road to Antelope Road, impacts to study roadway segments under the Cumulative Plus Project Condition would be *significant*.

Mitigation Measure(s)

Feasible mitigation does not exist to improve operations at PFE Road from Cook Riolo Road to Antelope Road. Specifically, the widening of PFE Road from Cook Riolo Road to Antelope Road was not included in the roadway assumptions contained within the updated Circulation Element of the DCWPCP.

**Table 17-13
Study Roadway Segment LOS – Cumulative Plus Project Condition**

Roadway	Segment	Facility Classification	Standard		Cumulative Condition (Cumulative Plus Project Condition)			
			LOS	Daily Volume Threshold per Lane	Daily Volume	V/C	LOS	Change in V/C
1. PFE Rd.	Watt Ave. to Walerga Rd.	Low Access Arterial	D	6,870	13,377 (13,525)	0.446 (0.451)	A A	0.005
2. PFE Rd.	Walerga Rd. to Oly Ln.	Low Access Arterial	D	6,870	7,981 (8,245)	0.532 (0.550)	A A	0.018
3. PFE Rd.	Cook Riolo Rd. to Antelope Rd.	Low Access Arterial	F	6,870	17,342 (18,280)	<i>1.156</i> <i>(1.219)</i>	<i>F</i> <i>F</i>	0.063
4. PFE Rd.	Antelope Rd. to Hilltop Rd.	Moderate Access Arterial	D	8,100	27,524 (28,580)	0.765 (0.794)	C C	0.029
5. Cook Riolo Rd.	Baseline Rd. to Vineyard Rd.	Low Access Arterial	F	6,870	9,040 (9,510)	0.603 (0.634)	D D	0.031
6. Cook Riolo Rd.	Vineyard Rd. to CRS	Low Access Arterial	F	6,870	12,787 (13,345)	0.852 (.890)	D D	0.038
7. Cook Riolo Rd.	CRS to PFE Rd.	Low Access Arterial	F	6,870	9,961 (10,635)	0.664 (.709)	B C	0.045
8. Cook Riolo Rd.	South of PFE Rd.	Level Terrain Rural Highway	D	7,750	400 (400)	0.016 (0.016)	A A	0.000
9. Antelope Rd.	PFE Rd. to Great Valley Dr.	Arterial (Moderate Access Control)	E	36,000	31,219 (32,250)	0.867 (0.896)	D D	0.029
10. Antelope Rd.	Great Valley Dr. to Poker Ln. (Sacramento County)	Arterial (Moderate Access Control)	E	36,000 †	32,782 (33,720)	0.911 (0.934)	D E	0.023

Notes:

- **Bold** indicates applicable LOS threshold exceeded.
- **Highlighted** indicates a significant impact.
- *Italic* indicates LOS E or F is acceptable per the DCWPCP.
- Roadway Segment #10 widened as part of project, becomes Arterial (Moderate Access Control).

Source: KD Anderson & Associates, Inc., 2018.

Prior to the July 2011 Circulation Element update, PFE Road was planned for closure just west of Cook Riolo Road when a specified volume of daily traffic was met. In order to balance the needs of the community with regional traffic demands, the most recent DCWPCP Circulation Element reflects plans to keep PFE Road open, but limited to the existing two-lane configuration. As such, the above impact would remain *significant and unavoidable*.

Utilities and Service Systems

17-18 Development of the proposed project, in combination with future buildout in the DCWPCP area, would increase demand for utilities and service systems. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

The proposed project includes development of 308 residential units within the project site. Development and operation of the proposed residential units would increase demand on water supply, wastewater treatment and conveyance, and solid waste services.

Water Supply

Water service to the project site is provided by the Northern Division Sacramento District of the California American Water Company (CAL-AM). CAL-AM anticipates that cumulative development within CAL-AM's West Placer Service Area, which encompasses the DCWPCP area, including the project site, would result in increased water demand from the West Placer Service Area, as shown in Table 16-2, of Chapter 16, Utilities and Service Systems, of this EIR. The project site is currently designated within the DCWPCP for residential, commercial, and industrial development, and, increased water demand due to buildout of the project site under the DCWPCP has been anticipated in CAL-AM's water demand estimates for the West Placer Service Area. As shown in Table 16-2, of this EIR, CAL-AM supplies are anticipated to meet the cumulative growth in demand from the West Placer Service Area, including the project site and the DCWPCP area, with annual surpluses of at least 97 acre-feet per year (afy). Compared to buildout of the project site under existing DCWPCP land use designations, development of the proposed project would result in an approximately 0.09 afy increase in water demand. Because CAL-AM anticipates supply surpluses for the West Placer Service area of at least 97 afy, an increased demand of 0.09 afy could be accommodated by CAL-AM supplies. Therefore, adequate water supplies exist to accommodate cumulative growth of the West Placer Service Area, which includes growth within the DCWPCP and increased demand due to operation of the proposed project.

Wastewater

The project's potential to impact wastewater treatment and wastewater conveyance are discussed in further depth below.

Wastewater Treatment

Wastewater from the project site and other areas in the DCWPCP, City of Roseville, and Placer County are treated at the Dry Creek Wastewater Treatment Plant (WWTP). Thus, the geographic setting for cumulative wastewater impacts is the Dry Creek WWTP service area. As discussed in Chapter 16, Utilities and Service Systems, of this EIR, the WWTP's permitted average dry weather capacity of 18 million gallons per day (mgd) would not be sufficient to accommodate the wastewater anticipated to be generated due to buildout of the WWTP service area, which is estimated to reach approximately 21 mgd. Thus, improvements to the Dry Creek WWTP are likely to be needed prior to buildout of the Dry Creek WWTP's service area, and the combined impact of cumulative development within the service area would be significant.

As further discussed on pages 16-17 through 16-18 of Chapter 16 of this EIR, the Dry Creek WWTP currently has capacity to accommodate increased dry weather and peak wet weather wastewater flows from the Dry Creek WWTP service area. The proposed project would contribute approximately 0.117 mgd of averaged dry weather flows and approximately 0.410 mgd of peak wet weather flow to the Dry Creek WWTP.²⁴ As of 2016, the Dry Creek WWTP maintained capacity to treat an additional 9 mgd of dry weather flow and 20 mgd of wet weather flows.²⁵ Thus, the Dry Creek WWTP has ample capacity to accommodate increased wastewater flows from the project site and other cumulative development within the region. Furthermore, the proposed project would be subject to payment of the County's sewer connection fees. The County's sewer connection fees are currently approximately \$9,100 per equivalent dwelling unit, \$7,600 of which would be distributed to the City of Roseville for ongoing and future upgrades to the Dry Creek WWTP. The County receives approximately \$1,500 of each connection fee, which is used for system upgrades and ongoing maintenance.

Payment of sewer connection fees would allow for capacity expansion of the Dry Creek WWTP as necessary to serve cumulative buildout of the WWTP's service area, including the proposed project site. Therefore, the proposed project's contribution to the significant cumulative impact related to wastewater treatment facilities would be less than cumulatively considerable.

Wastewater Conveyance

The proposed project would include construction of on-site wastewater conveyance infrastructure including wastewater lines throughout the project site, and a sewer lift station. In addition to the on-site infrastructure, the proposed project would include development of off-site wastewater conveyance infrastructure under one of the proposed force main alignments shown in Figure 16-5, within Chapter 16, Utilities and Service Systems, of this EIR.

²⁴ TSD Engineering, Inc. *Providence Park Subdivision Preliminary Sewer Study*. August 30, 2016.

²⁵ City of Roseville. *City of Roseville General Plan 2035*. August 17, 2016.

Although at the time of construction of the proposed sewer lift station and force main, the sewer lift station and force main would only service development within the project site, the sewer lift station and force main would be designed to accommodate wastewater flows from the surrounding shed area. As further discussed in Chapter 16, of this EIR, and in the Preliminary Sewer Study prepared by TSD Engineering, Inc. for the proposed project, the sewer shed area encompassing the project site includes areas south of Dry Creek, east of Cook Riolo Road, north of the Sacramento County line, and west of the Roseville City limits. Placer County General Plan Policy 4.D.4 requires developments that include the construction of wastewater conveyance facilities to size such facilities to accommodate the permitted densities within the applicable sewer shed area. Therefore, as required by Policy 4.D.4, the anticipated wet-weather wastewater flow from the built-out sewer shed area has been estimated by TSD Engineering, Inc. at 0.75 mgd, and the proposed sewer lift station and force main would be sized to accommodate such flow rate. Because the proposed wastewater conveyance infrastructure would be designed to accommodate buildout of the sewer shed area, the proposed project in combination with future buildout in the region would not have the potential to result in cumulative impacts to wastewater conveyance infrastructure in the project area.

Solid Waste

Solid waste collection services would be provided by Recology Auburn Placer and the Western Regional Sanitary Landfill (WRSL) and Material Recovery Facility (MRF). With the current space available and the recovery efforts by the MRF, the WRSL is anticipated to operate through 2058.²⁶ Development of the project site was anticipated by the DCWPCP. Although the proposed project includes redesignation and rezoning of the project site, the residential uses proposed for the project site would not be anticipated to result in significantly more intense waste generation than was previously anticipated for the project site in the DCWPCP and, thus, solid waste planning efforts. As such, the incremental increase in demand for solid waste collection and disposal services that would result from implementation of the proposed project has generally been anticipated by regional solid waste providers, the DCWPCP, and the Placer County General Plan. Therefore, the proposed project in combination with future buildout in the region would not result in a significant cumulative impact related to solid waste.

Conclusion

Based on the above, given that improvements to the Dry Creek WWTP are likely to be needed prior to buildout of the Dry Creek WWTP's service area, the combined impact of cumulative development within the service area would be significant. However, utility providers employ various programs and mechanisms to support provision of services to new development; for example, Placer County has adopted development fees consistent with State law to facilitate the provision of public services for projects consistent with the buildout of the General Plan, and various utility providers charge connection fees and

²⁶ Western Placer Waste Management Authority. *About WPWMA*. Available at <http://www.wpwma.com/about-wpwma/>. Accessed March 2017.

recoup costs of new infrastructure, including wastewater treatment infrastructure, through standard billings for services.

It should be noted that the project site has been previously anticipated for development under the DCWPCP. Development under the existing DCWPCP land use designations would result in increased demand for utilities and service systems from the project site including water service, wastewater treatment and conveyance, and solid waste service. The proposed project would include development of the project site for residential uses, rather than the mix of uses originally anticipated for the site in the DCWPCP. Despite the change in anticipated uses, as discussed above, the proposed project would not result in increased demand for utilities beyond what has been previously considered for buildout of the project site per site's current DCWPCP land use designations.

Cumulative buildout in the Dry Creek WWTP service area could result in a significant cumulative impact related to wastewater treatment infrastructure. However, the proposed project would be subject to the aforementioned utility fees and would result in reduced utility demand relative to buildout of the project site per the current DCWPCP land use designations. Thus, the project's impact would be minimized to the maximum extent feasible such that the project's incremental contribution to the significant cumulative impact would be *less than cumulatively considerable*.

Mitigation Measure(s)

None required.

17.3 ENERGY CONSERVATION

Appendix F of the CEQA Guidelines requires that EIRs include a discussion of the potential energy impacts of a proposed project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) Decreasing overall per capita energy consumption;
- (2) Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- (3) Increasing reliance on renewable energy sources.

The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2016 California Green Building Standards Code, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to each form of energy supply during construction and operations is provided below.

California Green Building Standards Code

The 2016 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which became effective with the rest of the CBSC on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of

building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California.

Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of Electric Vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 sf to ensure that all are working at their maximum capacity according to their design efficiencies; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2016 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2013 Building Energy Efficiency Standards resulting in a 28 percent reduction in energy consumption from the 2013 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

Construction Energy Use

Appendix F of the CEQA Guidelines identifies several potential sources of energy conservation impacts, including the project's construction energy requirements and energy use efficiencies by amount and fuel type. Construction of the proposed project would result in a temporary increase in energy consumption in the area.

For analysis purposes, construction of the proposed project would occur over approximately two years. As discussed in Chapter 5, Air Quality, of this EIR, construction is conservatively assumed to commence in 2018. It should be noted that per State legislation, emissions standards for construction fleets become more stringent each year. As such, should project construction occur at a later date than is currently anticipated, associated emissions and energy use would be reduced relative to the estimates presented within this EIR.

Even during the most intense period of construction, due to the different types of construction activities (e.g., demolition, site preparation, building construction), only portions of the site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the California Air Resources Board (CARB) In-Use Off-Road Diesel Vehicle Regulation, which includes measures to reduce emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements and imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. Project construction would also be required to comply with all applicable PCAPCD rules and regulations, such as Rule 218 related to architectural coatings and Rule 228 related to fugitive dust. As a result, construction equipment operating at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project, and would operate intermittently over the construction period for the project.

The CARB has recently prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),²⁷ which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The regulations described above, with which the proposed project must comply, as well as the required mitigation measures set forth in this EIR, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan. For example, Mitigation Measure 5-1 requires the project applicant to achieve a project-wide fleet-average reduction of NOx emissions by 20 percent, as compared to CARB statewide fleet average emissions.

Nonetheless, construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment. Consistent with Section 9.36.030 of the Placer County Noise Ordinance, construction activities would be limited to the following hours: a) Monday through Friday, 6:00 AM to 8:00 PM during daylight savings; b) Monday through Friday, 7:00 AM to 8:00 PM during standard time; and c) Saturdays, 8:00 AM to 6:00 PM. Construction activities are not permitted on Sundays and federal holidays.

²⁷ California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. January 20, 2017.

Electricity Demand During Construction

Typically, at construction sites, electricity from the existing grid is used to power portable and temporary lights or office trailers. Because grid electricity would be used primarily for steady sources such as lighting, not sudden, intermittent sources such as welding or other hand-held tools, the increase in electricity usage at the site during construction would not be expected to cause any substantial peaks in demand. However, the base demand for electricity in the area would increase. Overall, construction of the project would be over a relatively short duration in comparison to the operational lifetime of the proposed project and electricity demand from the site would occur intermittently throughout the buildout period of the project. As the site develops, operational electricity demand would become the dominant demand source. Operational electricity demand would be much greater than construction, and is discussed further below. It should be noted that standards or regulations specific to construction-related electricity usage do not currently exist.

The Pacific Gas and Electric Company (PG&E) currently supplies electricity to the project site, and would continue to serve the site during construction of the proposed project. Electricity is provided from PG&E-owned sources, and additional electricity supplies are purchased by PG&E from other energy providers. Thus, PG&E relies on a variety of electricity sources including hydropower, natural-gas-fired generators, nuclear, and renewable energy sources.²⁸ Construction of the proposed project, which would result in temporary increases in electricity demand, would not cause a permanent or substantial increase in demand that would exceed PG&E's demand projections or exceed the ability of PG&E's existing infrastructure to handle such an increase. Therefore, project construction would not result in any significant impacts on local or regional electricity supplies, the need for additional capacity, or on peak or base period electricity demands. In addition, standards or regulations specific to construction-related electricity usage do not currently exist. As such, the temporary increase in electricity due to project construction activities would not be considered an inefficient, wasteful, and unnecessary consumption of energy, and significant adverse impacts on electricity resources would not occur.

Oil Demand

Construction of the proposed project would involve vehicle trips to and from the project site by workers, delivery vehicles, and hauling trucks. Worker vehicle trips are assumed to utilize gasoline, and delivery and hauling trucks are assumed to utilize diesel fuel. Diesel fuel would also be used to power the construction and off-road equipment necessary for construction activities, including rubber tired dozers, tractors, excavators, cranes, and other types of equipment. In addition, diesel-fueled portable generators may be used where electricity from the grid cannot be provided or for where more immediate electricity is needed, such as for welding or other hand tools. Overall, operation of construction equipment at the project site would occur over a relatively short duration in comparison to the operational lifetime of the proposed project and would be intermittent over the period of construction for the project. Operational oil demand would be much greater than construction, and is discussed further below.

²⁸ Pacific Gas & Electric Company. *Company Profile*. Available at: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed April 2018.

A number of federal, State, and local standards and regulations exist that require improvements in vehicle efficiency, fuel economy, cleaner-burning engines, and emissions reductions. For example, as noted above, CARB has adopted the In-Use Off-Road Diesel Vehicle Regulation, which is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce GHG emissions. Any licensed contractor for the project and equipment would have to be in compliance with all applicable regulations, such as the in-use, off-road, heavy-duty vehicle regulation. Thus, the proposed project would comply with existing standards related to construction fuel efficiency. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

Therefore, the temporary increase in gasoline and diesel consumption due to project construction activities would not be an inefficient, wasteful, and unnecessary consumption of energy, and a significant adverse impact on oil resources would not occur.

Conclusion

Construction of the proposed project would result in a temporary increase in demand for energy resources. However, the temporary increase would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand. As such, the project would not result in an inefficient, wasteful, and unnecessary consumption of energy. Therefore, the proposed project would result in a less-than-significant impact on energy resources during construction.

Operational Energy Use

In order to ensure energy implications are considered in project decisions, Appendix F of the CEQA Guidelines requires a discussion of the potential energy impacts of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F identifies several potential methods of evaluating a project's energy use, which are listed as follows and discussed in further detail below, with the exception of the project's construction-related energy requirements and energy use efficiencies, which are discussed above:

- The project's energy requirements and energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.

- The effects of the project on energy resources.
- The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Building Energy

Currently, the project site is developed with a commercial nursery and wholesale grower (Haight Nursery), two single-family residences, and various outbuildings. Following implementation of the proposed project, PG&E would continue to provide electricity and natural gas to the project site. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity and natural gas for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. In addition, maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment.

The potential project demand for electricity and natural gas was estimated using CalEEMod, and is presented in Table 17-14.

Table 17-14		
Estimated Electricity and Natural Gas Consumption		
	Electricity (kWh/yr)	Natural Gas (kBTU/yr)
Proposed Project	2,600,680	7,957,080
<i>Source: CalEEMod, May 2018 (see Appendix C).</i>		

The proposed project would increase the intensity of development within the project site, and result in energy demands as shown in Table 17-14. Such energy demands would be higher than the energy demand of the existing developments within the project site; however, increased energy and natural gas demand does not necessarily mean that a project would have an impact related to energy resources. Based on Appendix F of the CEQA Guidelines, a proposed project would result in an impact related to energy resources if a project would result in the inefficient use or waste of energy.

Structures included in the proposed project would be subject to all relevant provisions of the 2016 update of the CBSC, including the 2016 Building Energy Efficiency Standards. Adherence to the most recent CALGreen and the 2016 Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Furthermore, future updates to the CBSC will likely provide increasingly stringent efficiency standards, and structures built in compliance with future CBSC would be increasingly more energy efficient. As such, the proposed project would not result in the inefficient or wasteful consumption of electricity or natural gas.

Transportation Energy

The annual VMT at full buildout of the proposed project is anticipated to be approximately 19,349 based on the Traffic Impact Analysis prepared for the proposed project.²⁹ Based on a projected project population of 958 residents, the per capita VMT for the project would be approximately 20.2. As part of the Traffic Impact Analysis, project per capita VMT was compared to regional per capita VMT. The SACOG 2016 Metropolitan Transportation Plan (MTP) indicates that regional per capita VMT averaged 24.5 in 2012 and is expected to be 24.2 in 2036; thus, the project's per capita VMT would be approximately 83 percent of the future regional average.

The average fuel economy for the U.S. passenger vehicle fleet was 23.9 miles per gallon (mpg) in 2015, the most recent year such data is available.³⁰ An average of 23.9 mpg, and an annual VMT of 19,349 would result in the consumption of 11,011 barrels of gasoline a year. California is estimated to consume approximately 558 million barrels of petroleum per year³¹ Based on the annual consumption within the State, the proposed project would result in a 0.00197 percent increase in the State's current consumption of gasoline. It should be noted that a portion of the trips associated with the proposed project would not necessarily be new trips. Rather, some trips would be redistributed as residents from other areas relocate to the project site. As such, energy consumption associated with project VMT would not be unique to the project.

California leads the nation in registered alternatively-fueled and hybrid vehicles. In addition, State-specific regulations encourage fuel efficiency and reduction of dependence on oil. Improvements in vehicle efficiency and fuel economy standards help to reduce consumption of gasoline and reduce the State's dependence on petroleum products. The proposed project would be required to comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Chapter 15, Transportation and Circulation, of this EIR, the proposed East Village area would retain the existing riparian corridor and oak woodlands within a proposed 16.8-acre open space area, including walking trails along the east boundary of the site, which would be owned and maintained by the homeowners association and protected from development. In addition, meandering sidewalks would be constructed along both sides of Antelope Road and the south side of PFE Road, west of the intersection of PFE Road and Antelope Road. The aforementioned on-site improvements would provide pedestrian connectivity within the project site and to existing off-site pedestrian facilities, thereby helping to discourage driving and reduce vehicle trips. Thus, the proposed project would not be considered to result in the inefficient or wasteful consumption of transportation energy.

²⁹ KD Anderson & Associates, Inc. *Traffic Impact Analysis for Mill Creek Subdivision, Placer County, California*. January 17, 2018.

³⁰ U.S. Energy Information Administration. *Total Energy, Table 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy*. Accessible at: <https://www.eia.gov/totalenergy/data/browser/?tbl=T01.08#/?f=A&start=200001>. Accessed on January 2018.

³¹ U.S. Energy Information Administration. *California: State Profile and Energy Estimates*. Accessible at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA. Accessed January 2018.

Conclusion

As discussed above, the proposed project operations would involve an increase in energy consumption. However, the proposed project would comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, which would ensure that the future uses would be designed to be energy efficient to the maximum extent practicable. Accordingly, the proposed project would not be considered to result in a wasteful, inefficient, or unnecessary usage of energy, and impacts related to operational energy would be considered less than significant.

17.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Per CEQA Guidelines Section 15126.2(c), this EIR is required to include consideration of significant irreversible environmental changes that would be caused by the proposed project, should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Buildout of the project area could involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development could generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project could involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project could result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in or contribute to the following irreversible environmental changes:

- Conversion of sparsely-developed land to a fully built-out residential community, thus precluding alternative land uses in the future; and
- Irreversible consumption of energy and natural resources associated with the future residents.

Implementation of the proposed project would result in the long-term commitment of resources to development of the site into a residential subdivision. The most notable significant irreversible impacts would be a reduction in natural vegetation for wildlife communities; increased generation of pollutants; and the commitment of non-renewable and/or slowly renewable natural and energy resources, such as lumber and other forest products, mineral resources, and water resources during construction activities. Operations associated with future uses would also consume natural gas and electrical energy. Such irreversible impacts which are, as yet, unavoidable consequences of urban growth, are described in detail in the appropriate technical sections (Chapters 4 through 16) of this EIR.

17.5 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

State CEQA Guidelines section 15126.2(d) requires an EIR to evaluate the potential growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, including the elimination of obstacles to growth, or by encouraging and/or facilitating other activities that could induce growth. Examples of projects likely to have growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or office complexes in areas that are currently only sparsely developed or are undeveloped.

The CEQA Guidelines are clear that while an analysis of growth-inducing effects is required, it should not be assumed that induced growth is necessarily significant or adverse. This analysis examines the following potential growth-inducing impacts related to implementation of the proposed project and assesses whether these effects are significant and adverse (see *CEQA Guidelines*, Section 15126.2[d]):

1. Foster population and economic growth and construction of housing.
2. Eliminate obstacles to population growth.
3. Affect service levels, facility capacity, or infrastructure demand.
4. Encourage or facilitate other activities that could significantly affect the environment.

Foster population and economic growth and construction of housing

As discussed in Chapter 13, Population and Housing, of this EIR, based on buildout of 308 residential units, and the DCWPCP's current rate of 3.11 persons per household,³² as identified in Table 13-2, the proposed project could generate an additional 958 new residents in the DCWPCP Area ($308 \times 3.11 = 957.8$). Considering the DCWPCP's estimated 2016 population of 5,601 residents, such growth would result in a total population in the DCWPCP Area of approximately 6,559 residents.³³ Therefore, the proposed project would result in population growth within the DCWPCP Area. However, the DCWPCP projected that the Area's population could grow to as much as 9,836 residents by 2010. Therefore, although the proposed project would have the potential to increase the population of the area to approximately 6,559 residents, such an increase in population would be within the growth projections used in the DCWPCP for the year 2010.

Consequently, the proposed project would result in population growth of the DCWPCP Area, but such growth would be within the buildout projections for the DCWPCP Area, and within growth projections for unincorporated areas within Placer County. Thus, while the project would foster population and economic growth, such growth would be similar to what has been previously anticipated for the project region, and a less-than-significant impact related to population and economic growth would occur.

³² U.S. Census Bureau, Census 2010 Summary File. Esri Converted Census data. April 06, 2017.

³³ ESRI Business Analyst. April 06, 2017.

Eliminate obstacles to population growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services, would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

As discussed in Chapter 16, Utilities and Service Systems, of this EIR, the County's existing water main infrastructure is anticipated to be sufficiently sized to accommodate the increased demand from the proposed project, and the project would not require the construction of new or expanded water conveyance infrastructure. Water conveyance infrastructure needed for the proposed project would be constructed on-site, and would be financed by the project applicant. Consequently, the construction of on-site water infrastructure would not be anticipated to result in elimination of obstacles to population growth.

The proposed project would include construction of on-site wastewater conveyance infrastructure as well as off-site infrastructure. On-site wastewater conveyance infrastructure would primarily be designed to accommodate wastewater flows from the proposed residences within the project site. However, as discussed in Chapter 16, Utilities and Service Systems, of this EIR, the proposed sewer lift station and off-site sewer conveyance infrastructure would be sized to provide adequate capacity to serve the build-out of the sewer shed area encompassing the project site. While the proposed project includes construction of a sewer lift station and off-site sewer conveyance infrastructure, per CEQA Guidelines Section 15130, the discussion of cumulative impacts in an EIR can rely on discussions of regional or areawide conditions from a general plan and general plan EIR. This growth-inducement discussion, therefore, relies upon the DCWPCP EIR and the Placer County General Plan EIR, which anticipate build-out of the sewer shed encompassing the project site.

The proposed conveyance infrastructure and sewer lift station would be designed to accommodate the proposed project and build out of the sewer shed under the existing land uses designated in the DCWPCP. However, the sewer lift station and sewer conveyance infrastructure would not serve areas not previously anticipated for development within the DCWPCP. Rather, as required by Placer County General Plan Policy 4.D.4, new developments are required to construct wastewater conveyance facilities that are adequately sized to provide sewer services based on permitted densities and applicable sewer shed area. As discussed in Chapter 16, of this EIR, and the Preliminary Sewer Study prepared for the proposed project by TSD Engineering, Inc. the lift station and sewer conveyance infrastructure would be designed specifically to accommodate development of the project's shed area, which includes areas designated in the DCWPCP for future development. In compliance with Placer County General Plan Policy 4.D.4, the capacity of the sewer lift station and conveyance infrastructure is intended to provide enough capacity to accommodate only the permitted densities within the project area, which would ensure that future growth occurs in compliance with the land use designations within the DCWPCP for the shed area. Therefore, the proposed project would not eliminate obstacles to growth that was not previously anticipated for the area.

Affect service levels, facility capacity, or infrastructure demand

Increases in population that would occur as a result of a proposed project may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental impacts. As discussed in Chapter 14, Public Services and Recreation, of this EIR, increased demands for fire and police protection services attributable to the proposed project would not necessitate the construction of new facilities that could cause significant environmental impacts. In addition, as discussed in Chapter 16, Utilities and Service Systems, of this EIR, wastewater generated by the proposed project could be accommodated by existing and planned wastewater treatment facilities and infrastructure, and existing water supply infrastructure exists to accommodate the domestic and fire flow demands associated with the proposed project.

The landfill that would serve the proposed project has adequate capacity to manage the solid waste generated as result of the project. Furthermore, mitigation measures set forth in Chapter 10, Hydrology and Water Quality, of this EIR would ensure that the proposed project would not create or contribute runoff water that would exceed the capacity of the County's stormwater drainage systems. Therefore, the proposed project would not increase population such that service levels, facility capacity, or infrastructure demand would require construction of new facilities that could cause significant environmental impacts.

Encourage or facilitate other activities that could significantly affect the environment

This EIR provides a comprehensive assessment of the potential for environmental impact associated with implementation of the proposed project. Please refer to Chapters 4 through 16 of this EIR, which comprehensively address the potential for impacts from urban development on the project site.

Conclusion

The project's increase in population growth would be within the buildout projections for the DCWPCP Area, as demonstrated above, and within growth projections for unincorporated areas within Placer County. Thus, while the project would foster population and economic growth, such growth would be similar to what has been previously anticipated for the project region, and a less-than-significant impact related to growth inducement would occur.

17.6 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

According to the CEQA Guidelines Section 15126.2(b), an EIR must include a description of impacts identified as significant and unavoidable, should the proposed action be implemented. When the determination is made that either mitigation is not feasible or only partial mitigation is feasible, such that the impact is not reduced to a less-than-significant level, such impacts would be considered significant and unavoidable. This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigation measures imposed by the County. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the County Board of Supervisors as part of the County's certification action. The significant and unavoidable impacts of the proposed project are listed below.

- 11-5** Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (“Farmland”), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, or involve other changes in the existing environment which, due to their location or nature, could result in the loss or conversion of Farmland (including livestock grazing) or forest land to non-agricultural or non-forest use. Based on the analysis, even with mitigation, the impact is *significant and unavoidable*.
- 17-4** Cumulative loss of habitat for special-status species. Based on the analysis and despite implementation of mitigation, the impact is *cumulatively considerable and significant and unavoidable*.
- 17-12** Involve other changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use. Based on the analysis and with the implementation of mitigation, the project’s incremental contribution to this significant cumulative impact is *cumulatively considerable and significant*.
- 17-16** Study intersections under the Cumulative Plus Project Condition. Based on the analysis and with implementation of mitigation, the impact to PFE Road/Antelope Road is less than significant. However, given the lack of feasible mitigation, impacts to the Cook Riolo Road/Vineyard Road and PFE Road/Cook Riolo Road intersections are *significant and unavoidable*.
- 17-17** Study roadway segments under the Cumulative Plus Project Condition. Based on the analysis and the lack of feasible mitigation, the impact to the segment of PFE Road from Cook Riolo Road to Antelope Road is *significant and unavoidable*.